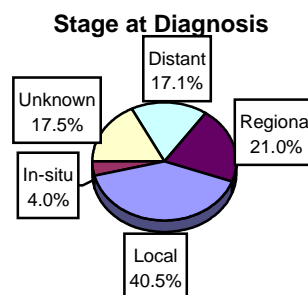


## All Sites

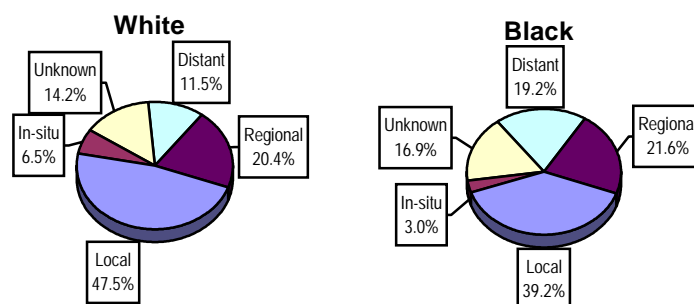
### Incidence and Mortality Summary

Age-adjusted incidence rate per 100,000	Male	Female	Total
DCCR	547.0	408.9	463.9
SEER	452.2	355.9	395.3
Total # of new cases	1486	1550	3039
Total # of deaths	569	593	1162
Incidence rate: 463.9 (95% confidence interval: 446.9-480.8)			
Incidence rates by wards: Mean: 459.6 Median: 453.3			
Range: 313.3-597.5 /100,000			



### Total Cases and Deaths by Ward

Ward 1	296	117
Ward 2	373	133
Ward 3	384	131
Ward 4	504	224
Ward 5	477	174
Ward 6	370	139
Ward 7	381	148
Ward 8	221	90
Unknown	33	6



### Description

<b>Incidence</b>	The all cancer incidence rate in DC, 464/100,000, is significantly higher than the SEER rate for 1998. The ratio of the highest incidence rate by ward (Ward 4) to the lowest rate (Ward 8) is almost two-fold.
<b>Mortality</b>	The death rate in DC, 170/100,000 is about 1.5 times higher than for the US.
<b>Age</b>	All cancer incidence rates begin to rise in the 30-39 age group and continue to increase with advancing age.
<b>Race &amp; Gender</b>	<p>Males have higher incidence of all cancers than females (1.3) and rates for both genders are significantly higher in DC than rates reported in SEER. The male/female ratio in DC is similar to that in SEER data. The DC mortality is higher for white females compared to white males under age 60 years. A similar difference is not apparent in African-American mortality.</p> <p>The incidence rate for all cancers is 1.4 times higher in African-Americans in DC compared to Caucasians. Black male incidence rates and mortality rates are about twice as high as for white males. SEER data suggest much smaller ratios of about 1.1 to 1.3. Incidence of all cancers in females are almost equal but mortality is 1.5 times higher in black women compared to white. These data indicate that deaths from cancer in black females account for the excess in the black to white mortality ratio compared to the incidence ratio in DC.</p>
<b>I/M ratio</b>	The incidence to mortality ratio in African-American males compared to other race-gender groups is low (I/M = 1.8) which may be related to the specific cancers which occur with frequency in this group. The highest ratio occurs in white females (I/M = 3.5). (High I/M ratios suggest better survival.)
<b>Trends</b>	Mortality rates in black and white males have declined over the past three years in DC. There has been little decline in female rates for either race. These data are

similar to the experience in the US.

The incidence rates have declined in white males in DC. However, although a decline in cancer incidence for both black and white males is seen in SEER data, black males in DC have had little decline in rates. Both SEER and DC data demonstrate no decrease in cancer incidence over time in females of either race.

**Stage** Localized and in situ (for bladder only) stages at diagnosis represent 45 percent of cancers in DC. There is a wide discrepancy in the percent of cancers at this stage by race with 54 percent of cancers in the white population and only 42 percent of cancers in the black population diagnosed at early stages. Since stage and survival differ by cancer, stage will be examined by site.

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### General Risk Factors

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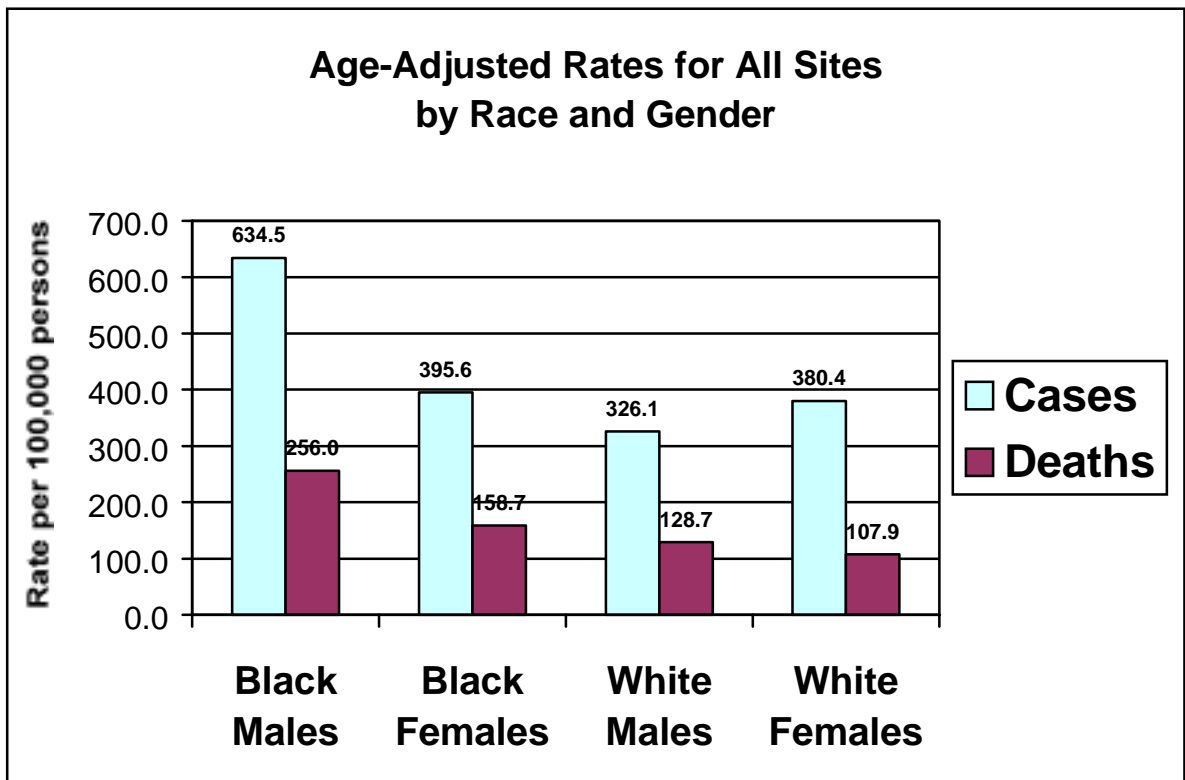
**Smoking** Tobacco use is the single most important risk factor for cancer incidence and mortality.

**Other** Heavy alcohol abuse, especially in conjunction with tobacco use, is an additional risk factor in many cancer related deaths. Variation in screening levels can influence both incidence and especially stage for some common cancers as breast cancer and cervical cancer in females and prostate cancer in males.

**Diet** Diets that are higher in fat and lower in fruits and vegetables have been associated with increased incidence of several cancers.

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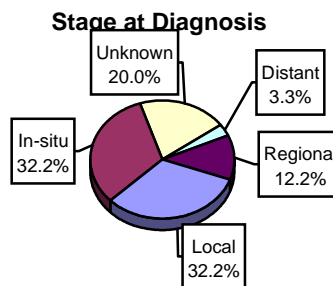
**Fig. 2: 1998 Age-adjusted Cancer Incidence and Mortality Rates for All Sites Combined by Race and Sex**



# Bladder

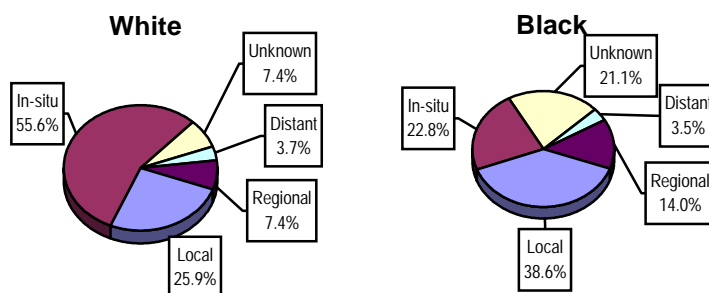
## Incidence and Mortality Summary

Age-adjusted incidence rate per 100,000	Male	Female	Total
DCCR	19.8	8.8	13.3
SEER	29.0	7.4	16.7
Total # of new cases	55	35	90
# of deaths	9	12	21
Incidence rate: 13.3 (95% confidence interval: 10.4-16.1)			
Incidence rates by wards: Mean: 13.2 Median: 12.6			
Range: 6.6-19.8 /100,000			



## Total Cases and Deaths by Ward

Ward	Total Cases	Deaths
Ward 1	7	3
Ward 2	9	3
Ward 3	16	4
Ward 4	10	3
Ward 5	12	-
Ward 6	16	7
Ward 7	14	-
Ward 8	5	1
Unknown	1	-



## Description

<b>Incidence</b>	The incidence rate for bladder cancer in DC is lower than that of the U.S. essentially due to a lower rate in males. Bladder cancer is the only site for which incidence rates include both in situ and invasive cancers for reported data in SEER and ACS.
<b>Mortality</b>	The mortality rate of 2.6/100,000 is lower than the U.S. rate. Both incidence and mortality rates in DC are about 80 percent of U.S. rates.
<b>Age</b>	Bladder cancer occurs in older ages with earliest cases beginning after age 45 and major increases after age 70.
<b>Race &amp; Gender</b>	<p>The incidence rate for males in DC is 2.3 times higher than for females. Mortality for females of both races is similar to the rates reported for the U.S. For both races the incidence rate for females in DC is about 1.4 times higher than SEER incidence rates.</p> <p>Incidence rates in black and white males are equal in DC for 1998 whereas U.S. data suggest a 2-fold higher rate in white males. The incidence for white males is lower than SEER but for black males, incidence is higher. Thus the overall low incidence rate for bladder cancer in males in DC compared to SEER is due to a reduced incidence rate in white males only.</p>
<b>I/M ratio</b>	The I/M ratio is very high for black males especially because of low mortality. For other race/sex groups, the I/M ratios are similar to SEER data. Small numbers of both incident cases and especially deaths make ratios from year to year instable.
<b>Trends</b>	U.S. data suggest that all bladder cancer incidence rates are declining except in black females. DC rates show a decline only in white males.

**Stage** In-situ and localized cancers represented 64 percent of all incident cases of bladder cancer in DC, compared to 73 percent in SEER. The proportion of localized cancer is lower for blacks (61%) than whites (82%). The ratio of in situ to localized lesions in whites is higher than in blacks. This should result in poorer survival in blacks than whites. SEER data indicate that the 5-year relative survival is over 90% for early stage cancers, but drops to 50% for regional and 7% for distant spread.

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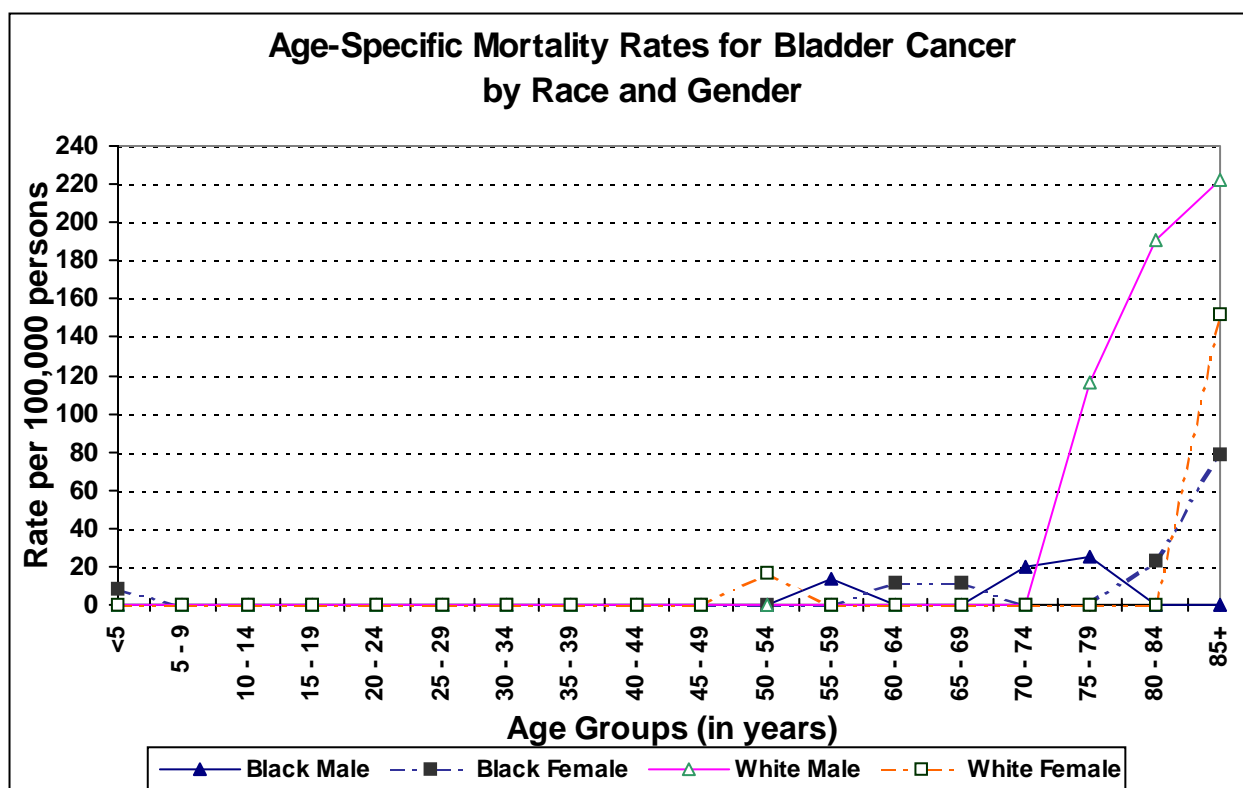
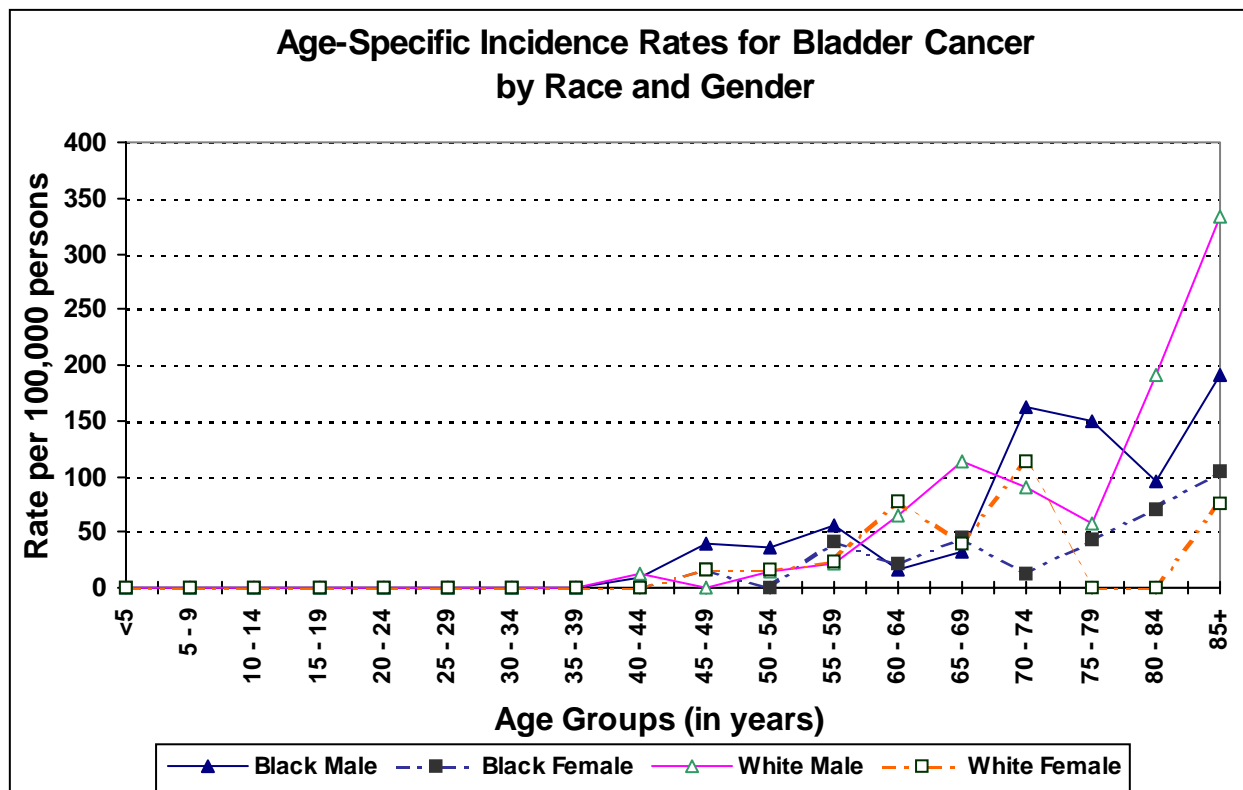
### General Risk Factors

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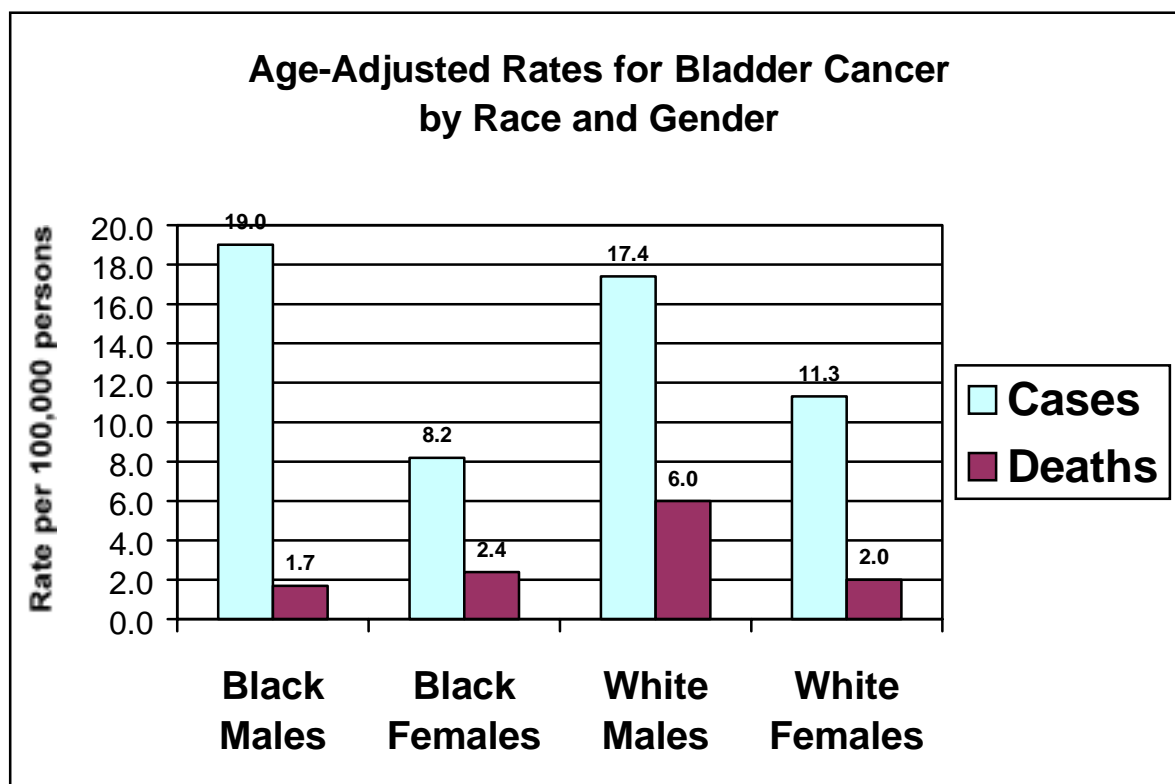
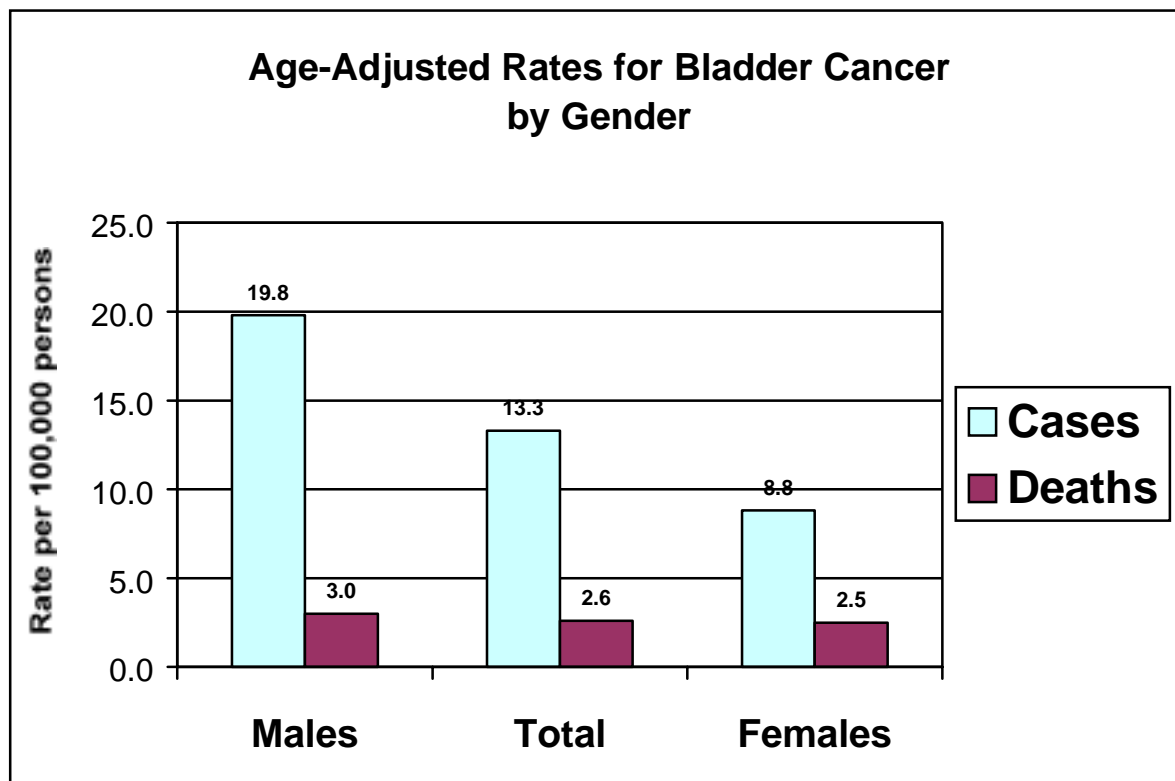
<b>Smoking</b>	Tobacco consumption has been associated with up to a five-fold higher incidence of bladder cancers.
<b>Occupation</b>	Occupational exposures, most prominently within the textile, rubber, and leather industries have been known to be associated with increased rates.
<b>Other</b>	Beta-naphthylamine and benzidine are recognized bladder carcinogens. Chronic infections, calculus disease, infection with a parasitic fluke - <i>Schistosoma hematobium</i> , and treatment with the drug cyclophosphamide may also cause bladder cancer.

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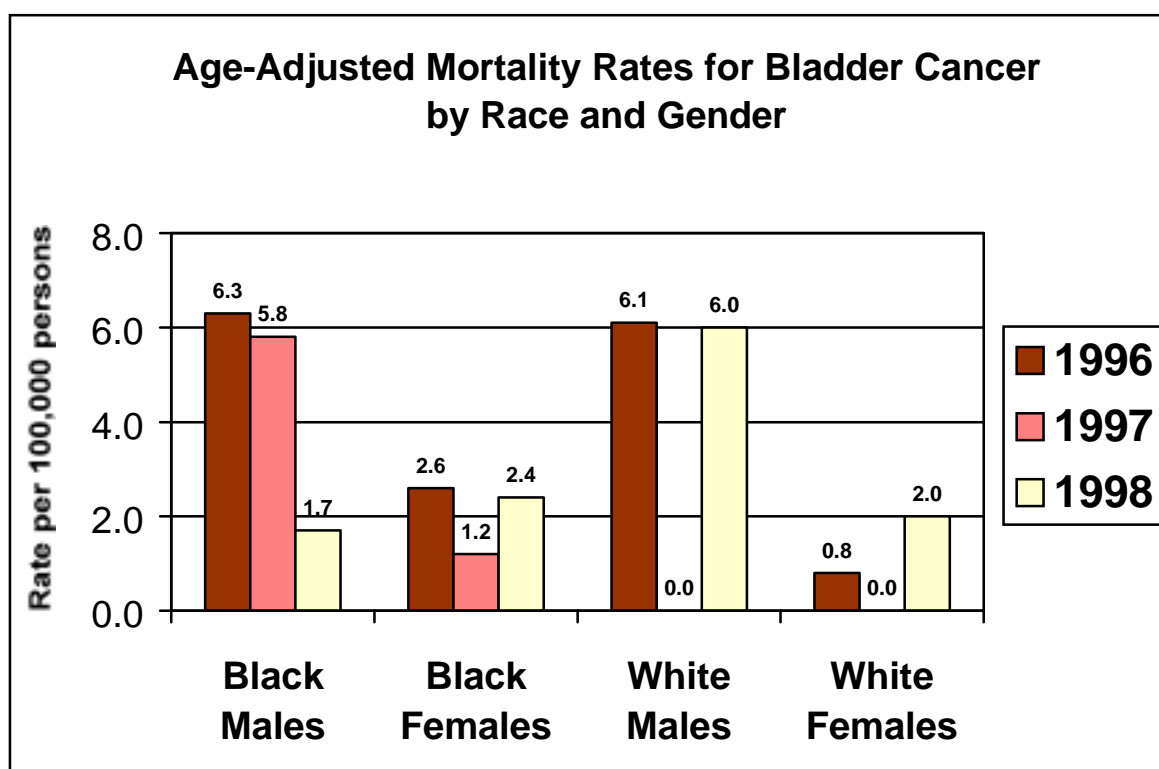
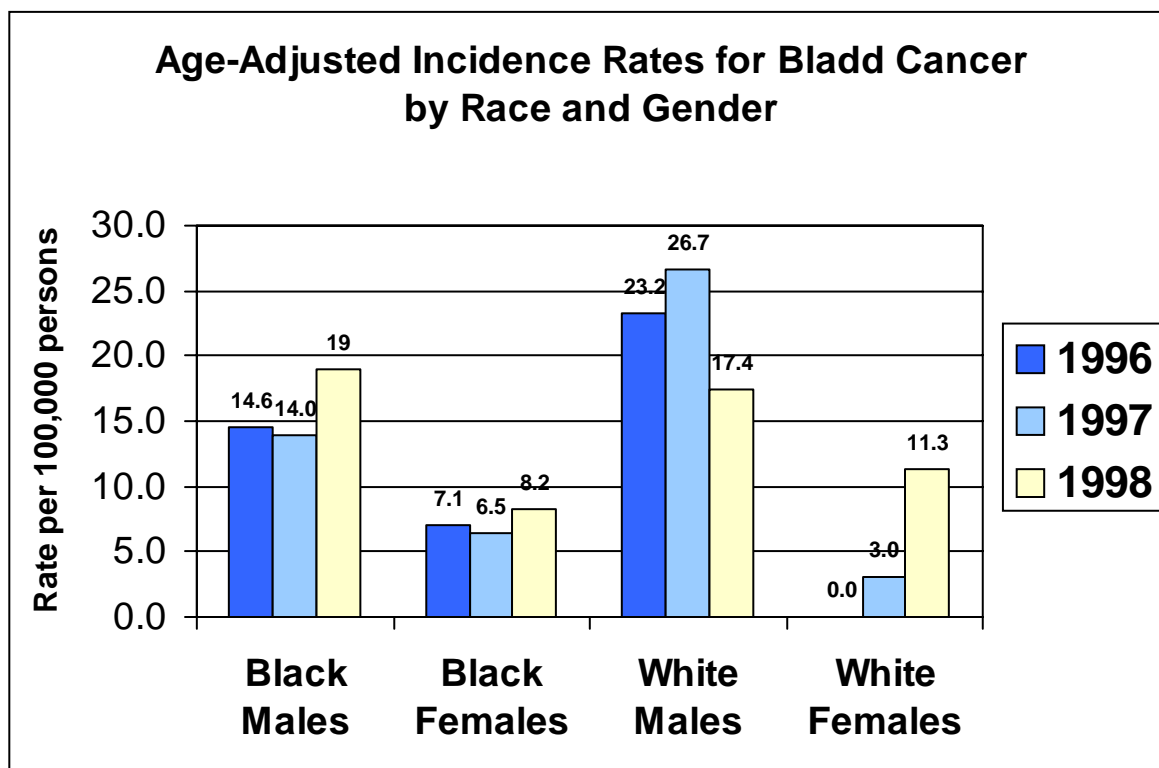
**Fig. 4: 1998 Age-Specific Incidence and Mortality Rates by Race and Gender – Bladder Cancer**



**Fig. 5: 1998 Age-adjusted Cancer Incidence and Mortality Rates for Bladder Cancer by Race and Sex**



**Fig. 6: 1996 to 1998 Trends in Age-Adjusted Cancer Incidence and Mortality Rates by Race and Sex – Bladder Cancer**



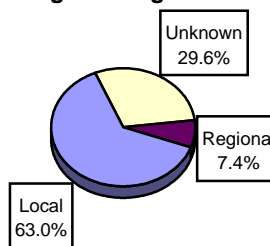


# Brain

## Incidence and Mortality Summary

Age-adjusted incidence rate per 100,000	Male	Female	Total
DCCR	6.3	2.4	4.1
SEER	6.8	5.0	5.8
Total # of new cases	18	9	27
# of deaths	5	4	9
Incidence rate: 4.1 (95% confidence interval: 2.5-5.6)			
Incidence rates by wards: Mean: 4.4 Median: 3.7			
Range: 1.4-8.0 /100,000			

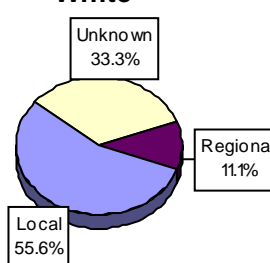
Stage at Diagnosis



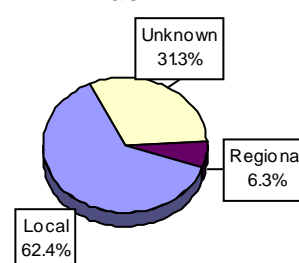
## Total Cases and Deaths by Ward

Ward	Cases	Deaths
Ward 1	6	2
Ward 2	3	0
Ward 3	7	1
Ward 4	6	1
Ward 5	2	4
Ward 6	1	0
Ward 7	2	1
Ward 8	0	0
Unknown	0	0

White



Black



## Description

**Incidence** The incidence rate in DC is significantly lower than SEER rate. The total number of cases and deaths in DC are small.

**Mortality** The mortality rate in DC is 1.4/100,000, which is lower than the U.S. rate.

**Age** Cases of brain cancer in DC first occur at ages 5-9 years and a second peak begins in young adulthood and increases into older ages reflecting a similar age distribution to national data. This is the second most common cancer among children.

**Race & Gender** Males have a higher incidence rate than females (2.6-fold). Whites generally have a higher rate than blacks both in DC and the U.S. Incidence rates by race and gender differ in DC from the US. Although white females have higher rates than black females, the racial predominance is opposite for males with black males having a 1.4 time higher rate than white males. The SEER data on the other hand, show almost a two-fold excess in white compared to black males.

**I/M ratio**

**Trends** The rates appear to be declining in most race/gender groups in the U.S.

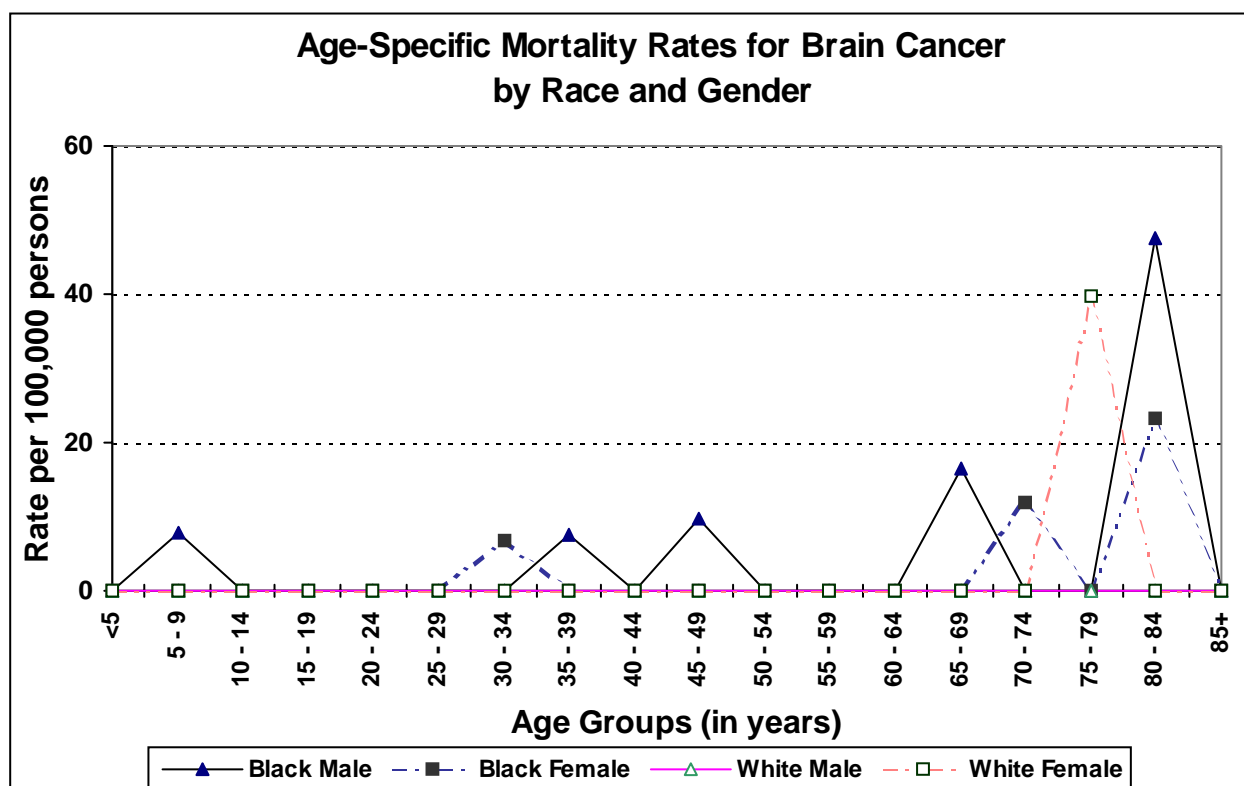
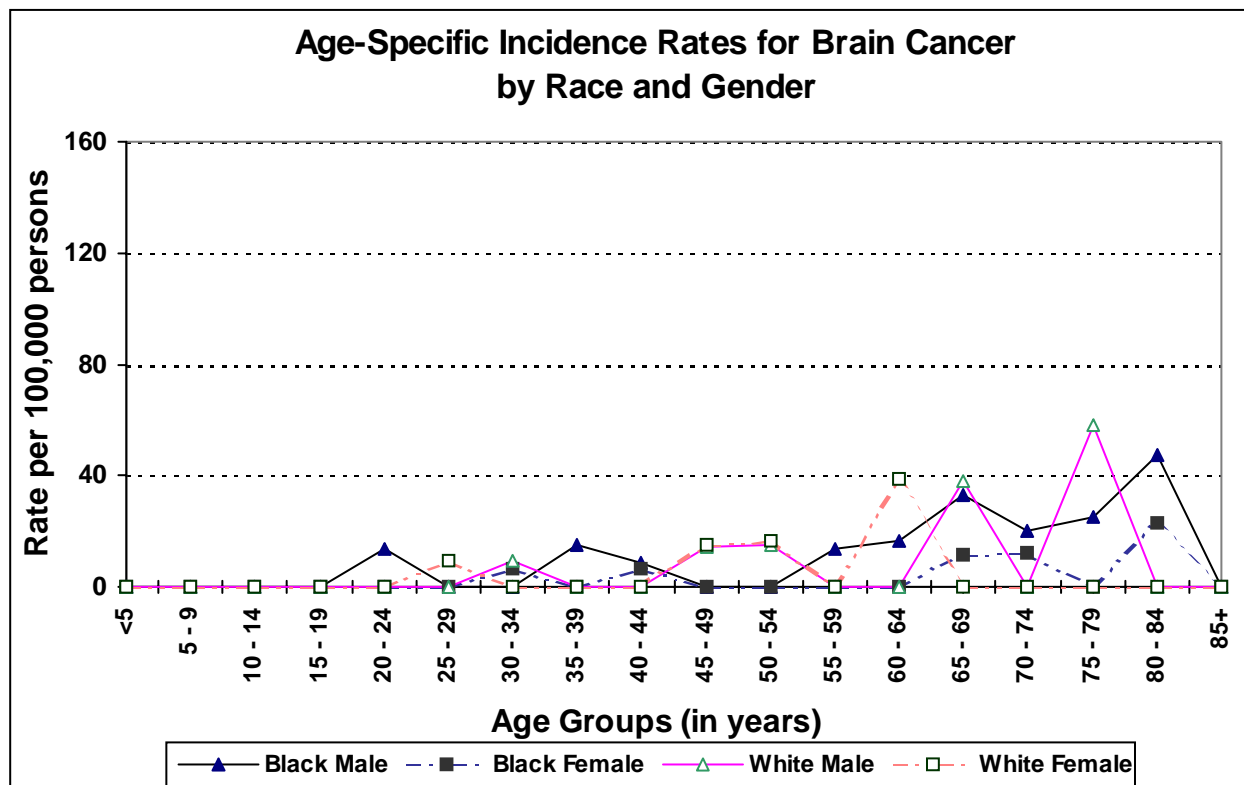
**Stage** Not relevant for brain cancer.

## General Risk Factors

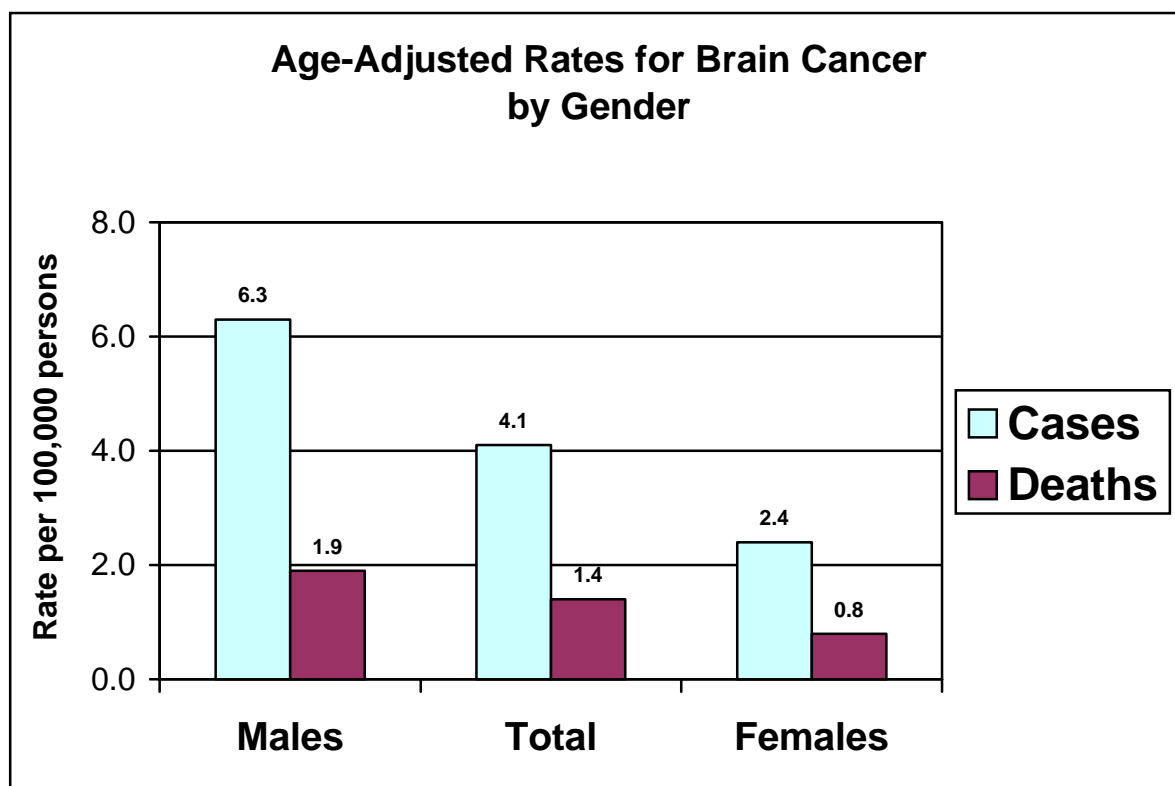
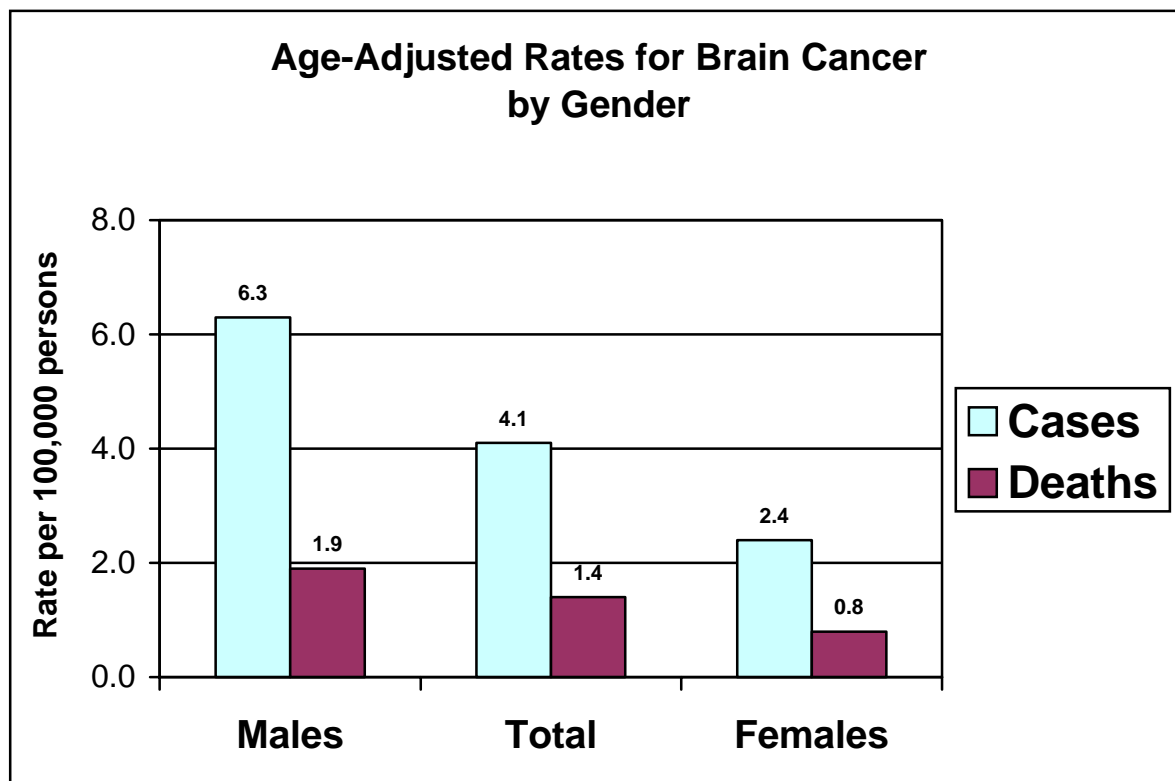
**Occupation** Many occupational and environmental exposures have shown suggestive associations with elevated rates of brain cancer, including radiation, vinyl chloride, and agricultural chemicals. These associations are still inconclusive.

**Other** Human Immunodeficiency Virus (HIV) infected individuals have a much greater risk of developing brain lymphoma. Prior radiation therapy to the head is a known risk factor.

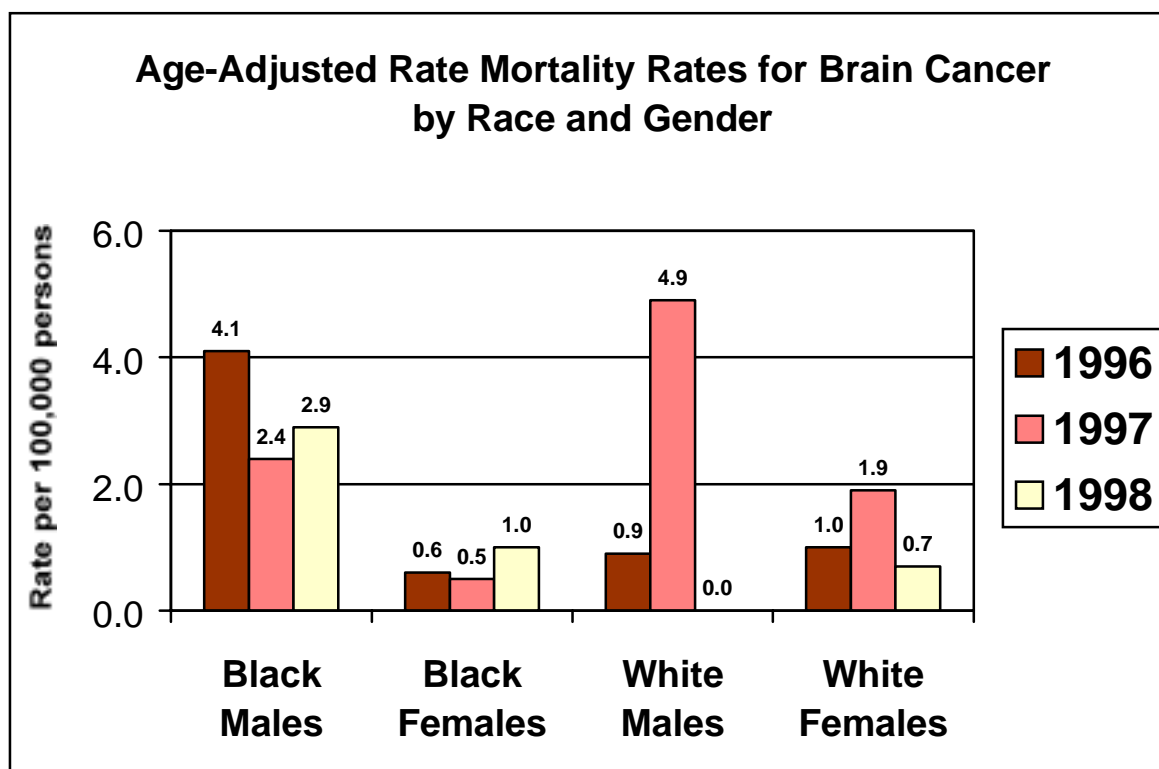
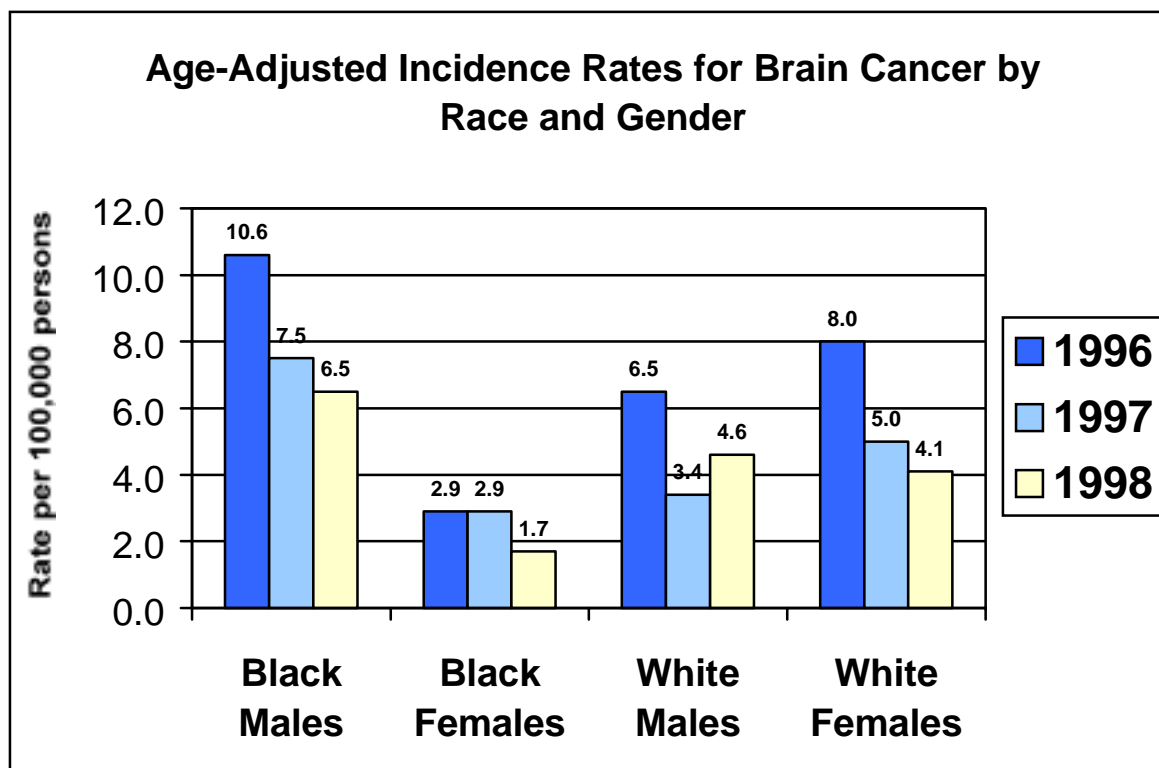
**Fig. 7: 1998 Age-Specific Incidence and Mortality Rates by Race and Gender – Brain Cancer**



**Fig. 8: 1998 Age-adjusted Cancer Incidence and Mortality Rates for Brain Cancer by Race and Sex**



**Fig. 9: 1996 to 1998 Trends in Age-Adjusted Cancer Incidence and Mortality Rates by Race and Sex – Brain Cancer**

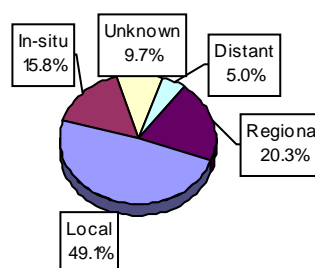


# Breast

## Incidence and Mortality Summary

Age-adjusted incidence rate per 100,000	Male	Female	Total
DCCR	3.6	153.8	87.9
SEER	0.9	118.1	63.8
Total # of new cases	10	566	576
# of deaths	0	117	117
Incidence rate: 87.9 (95% confidence interval: 80.6-95.3)			
Incidence rates by wards: Mean: 87.0 Median: 91.5 Range: 41.7-132.9 /100,000			

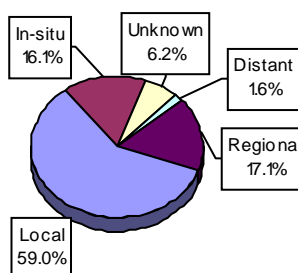
Stage at Diagnosis



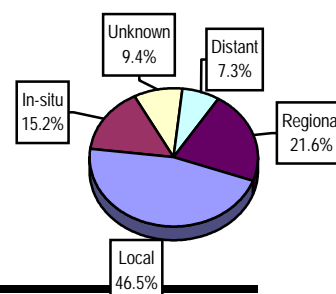
## Total Cases and Deaths by Ward

Ward	Cases	Deaths
Ward 1	39	6
Ward 2	93	16
Ward 3	114	16
Ward 4	95	23
Ward 5	73	16
Ward 6	58	15
Ward 7	71	18
Ward 8	31	7
Unknown	2	0

White



Black



## Description

<b>Incidence</b>	The breast cancer incidence rate for females in DC is 153.8 per 100,000, which is significantly higher than the SEER rate for 1998. Ward 8 has the lowest and Ward 3 the highest incidence rates for DC. The rates differ by 3-fold among the wards.
<b>Mortality</b>	The mortality rate for females is 30.4 per 100,00, which is higher than the SEER rate. The mortality rates differ by ward but they do not rank in the same order as incidence by wards. The incidence rates for each race are significantly higher than US rates.
<b>Age</b>	The incidence rates for breast cancer begin to rise with age group 30-34 years and continue to rise, with rates for white females exceeding those for black females after age 45. The mortality rate also begins to rise after age 30 and continues to rise into older ages with black rates exceeding white rates.
<b>Race &amp; Gender</b>	The incidence rate is higher in white than black females, but the death rates are 1.6 times higher in blacks. This suggests a poorer survival of black females with breast cancer.
<b>I/M ratio</b>	The incidence to mortality ratio or I/M indicates that the ratio in black females is 3.8 and in white females 8.5. The SEER ratio for blacks is 3.3 and for whites 4.7 suggesting that the wide variation in the white ratio compared to SEER could be explained by screening differences by race in older ages. A review of the relative incidence by age also suggests a difference in screening. Black females have higher incidence than whites by about 1.5-fold until age 45-49 years at which point the ratio reverses and white females have higher rates than blacks by about 1.5-fold. This difference continues through age 69 years. After age 70 the incidence rates are similar by race.
<b>Trends</b>	The trend suggests that incidence rates are increasing for both blacks and whites but mortality has declined slightly in black females and has been stable in white

females. The SEER rates have shown very small changes in incidence rates for either race and no change in mortality rates for black females and a 2% drop in white female rates.

**Stage** Overall, 15.8% of breast cancer cases identified in D.C. are in the in-situ stage. The black and white females have an equal proportion of breast cancers diagnosed at this stage (15.2% to 16.1% respectively.) However, the black females in DC are diagnosed 27% less frequently at a local stage than white females. A similar comparison from SEER data is 19%. Black females are also more likely to have regional and distant spread at the time of diagnosis (28.9 vs 18.7% in black and white females respectively.)

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### General Risk Factors

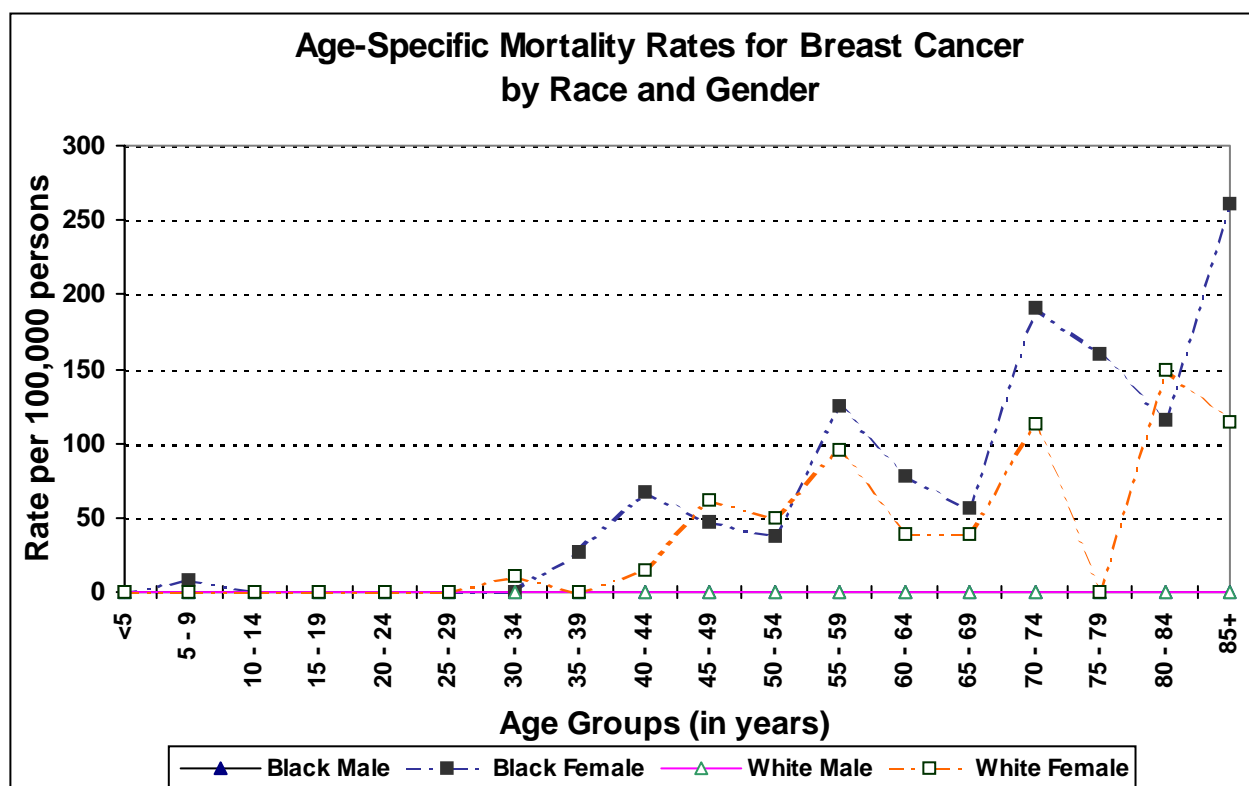
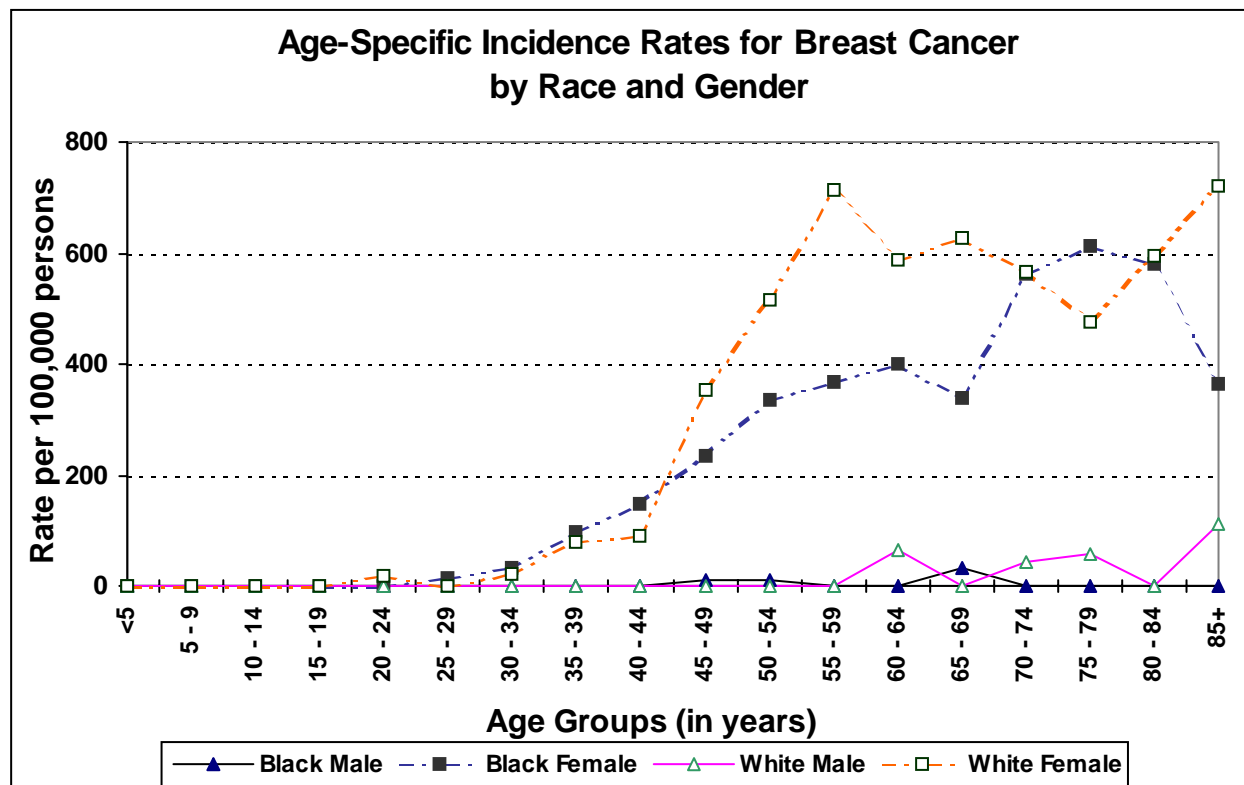
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**Other** Obesity, sedentary life-style, having cancer in an opposite breast, having a mother or sister with breast cancer, drinking 2 or more alcoholic beverages a day, and a history of radiation therapy to the chest area when young have all been implicated as associated risk factors for this cancer.

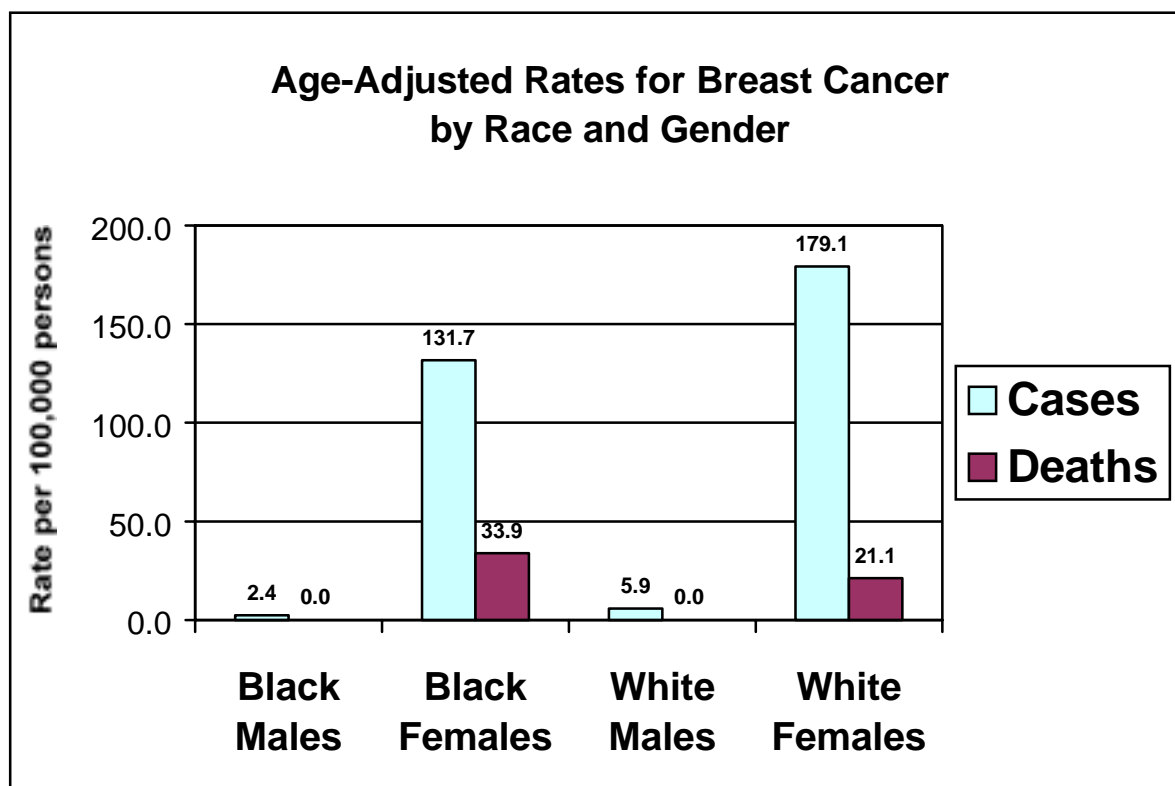
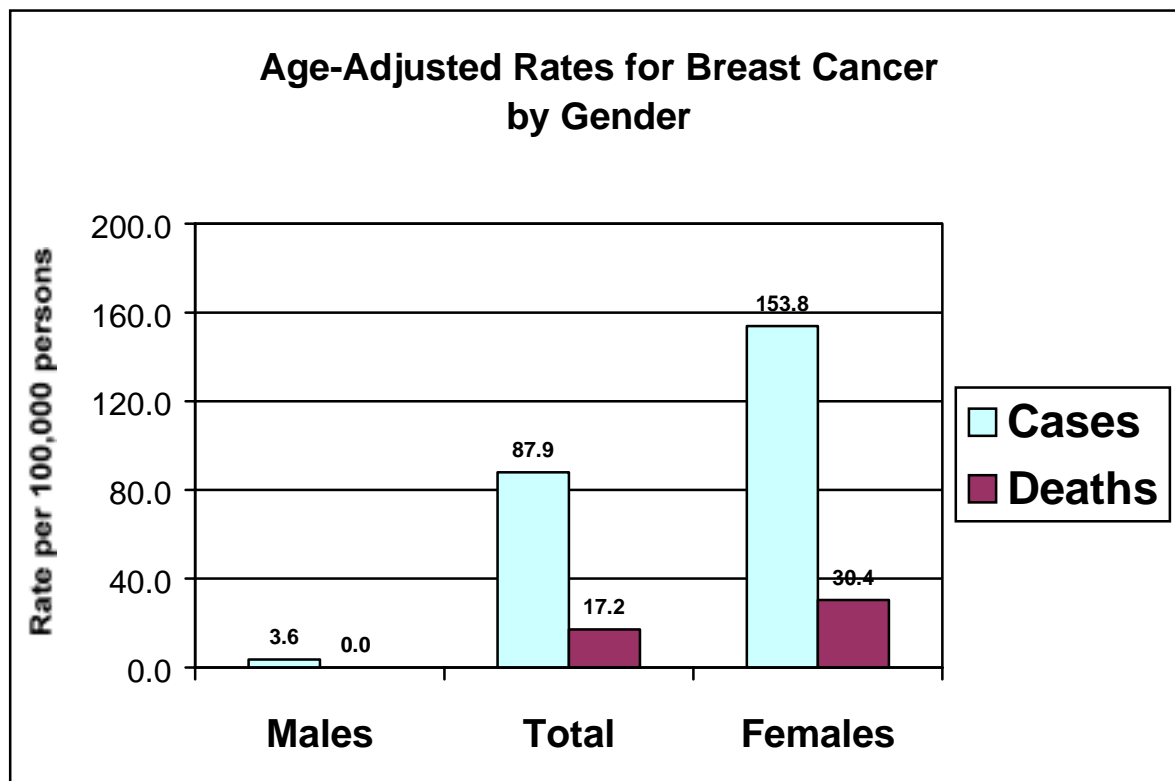
**Hormonal** Young age at menarche, late age at menopause, nulliparity and late first full term pregnancy increase the risk of breast cancer. Long-term use of exogenous estrogens increase the risk.

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**Fig. 10: 1998 Age-Specific Incidence and Mortality Rates by Race and Gender – Breast Cancer**

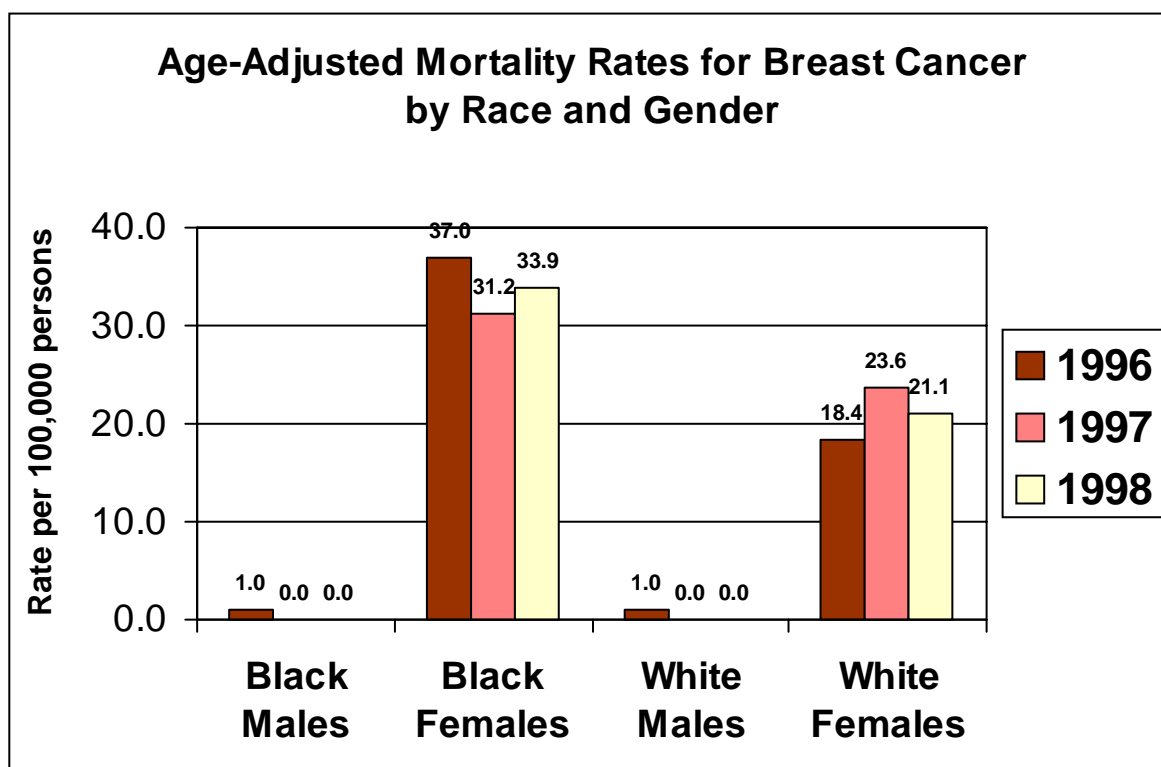
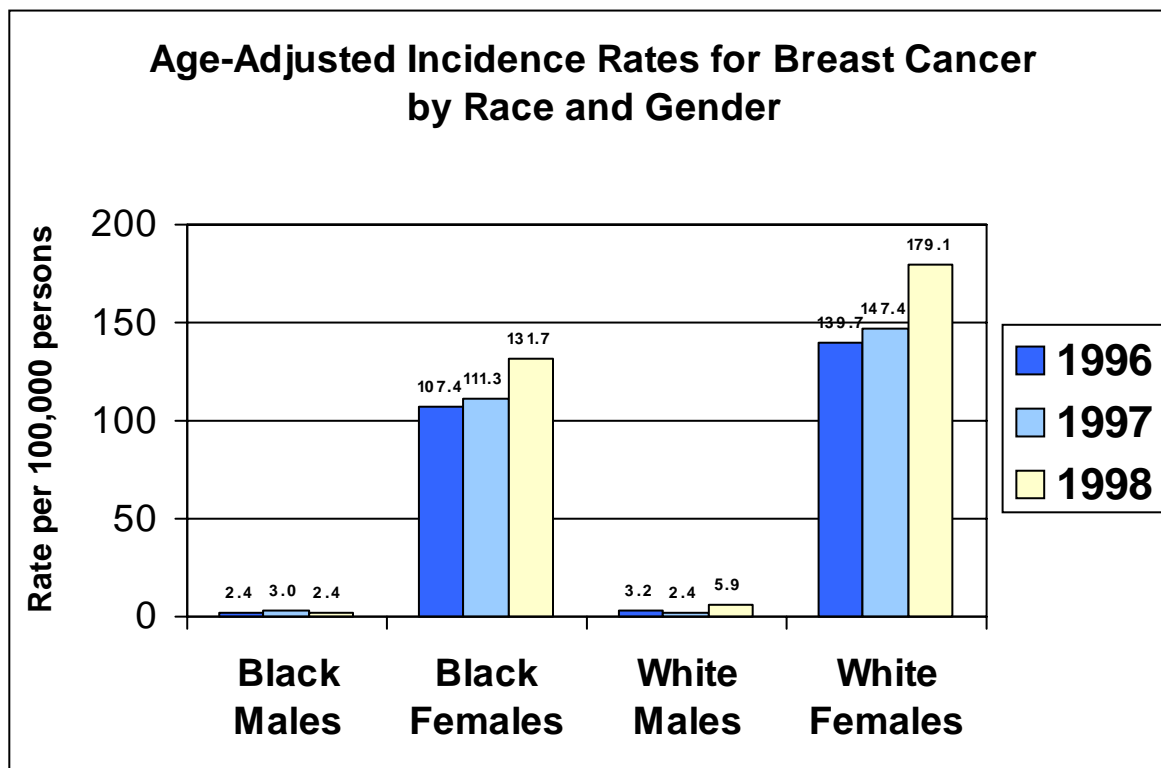


**Fig. 11: 1998 Age-adjusted Cancer Incidence and Mortality Rates for Breast Cancer by Race and Sex**





**Fig. 12: 1996 to 1998 Trends in Age-Adjusted Cancer Incidence and Mortality Rates by Race and Sex – Breast Cancer**



# Cervix

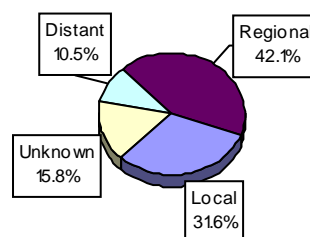
## Incidence and Mortality Summary

Age-adjusted incidence rate per 100,000	Male	Female	Total
DCCR	-	10.2	-
SEER	-	7.7	-
Total # of new cases	-	38	38
# of deaths	-	8	8
Incidence rate: 10.2 (95% confidence interval: 6.9-13.2)			
Incidence rates by wards: Mean:10.5 Median: 8.1 Range: 5.4-34.1/100,000			

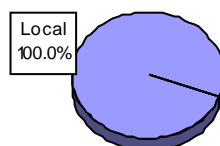
## Total Cases and Deaths by Ward

Ward	Cases	Deaths
Ward 1	3	0
Ward 2	2	1
Ward 3	2	0
Ward 4	6	1
Ward 5	2	2
Ward 6	7	0
Ward 7	5	1
Ward 8	11	3
Unknown	0	0

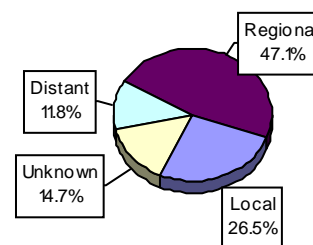
## Stage at Diagnosis



## White



## Black



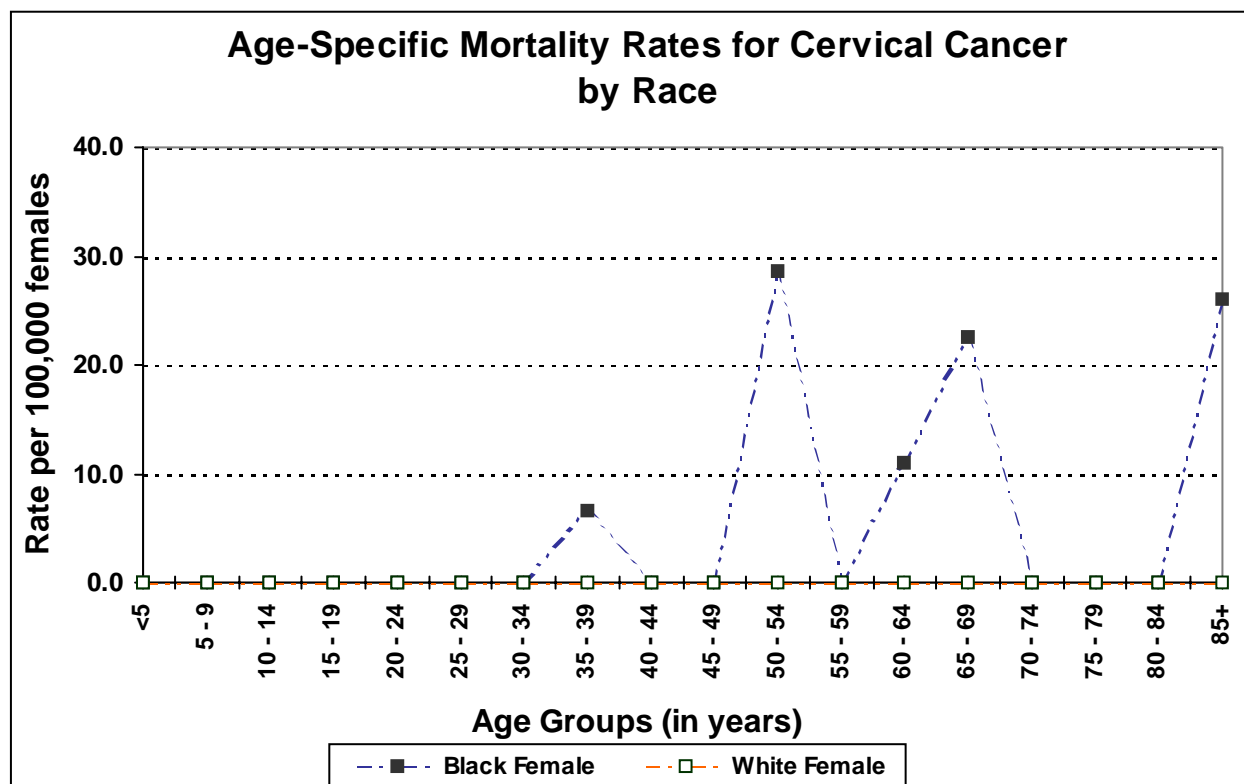
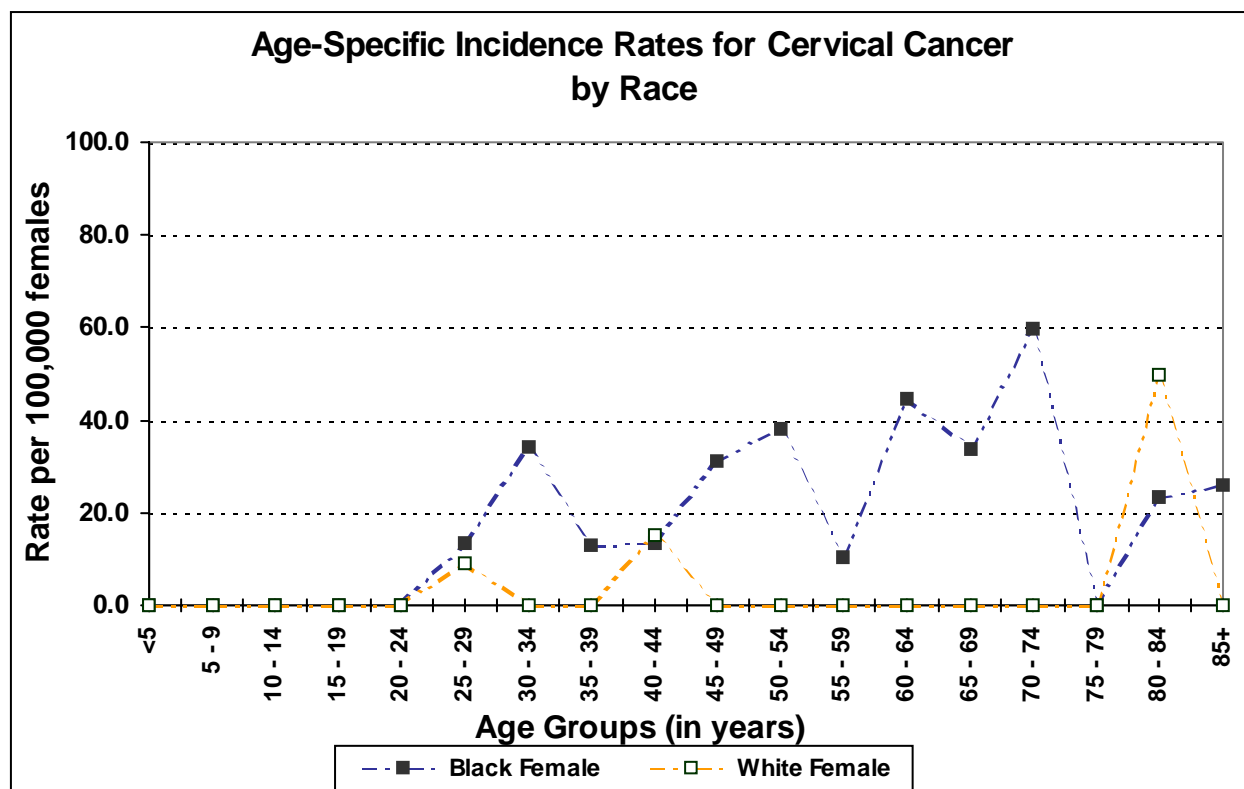
## Description

<b>Incidence</b>	Cervical cancer rate in DC is 10.2/100,000, a rate higher than the SEER rate of 7.7. Only 3 cases occurred in white women.
<b>Mortality</b>	Deaths are too few to describe subgroups, but the total rate is 2.3/100,000
<b>Age</b>	Cases occur first at ages 25-29 and increase to oldest age groups.
<b>Race &amp; Gender</b>	African-American women in DC have an incidence rate 1.7 times higher than Caucasians in the area, a ratio which is similar to the 1.5 ratio reported by SEER.
<b>I/M ratio</b>	The I/M ratio in black women is 4.1, which is higher than in US. This may suggest that the high incidence in DC compared to the US may be due to increased screening in DC.
<b>Trends</b>	US rates indicate non-significant changes in white and black female rates over the past five years, and DC rates suggest similar trends.
<b>Stage</b>	In black females, only 26.5 percent of the cases were found in a localized state compared to 44 percent in SEER. Although numbers are small, DC cervical cancer cases are more likely to be detected at regional and distant stages than are US cases.

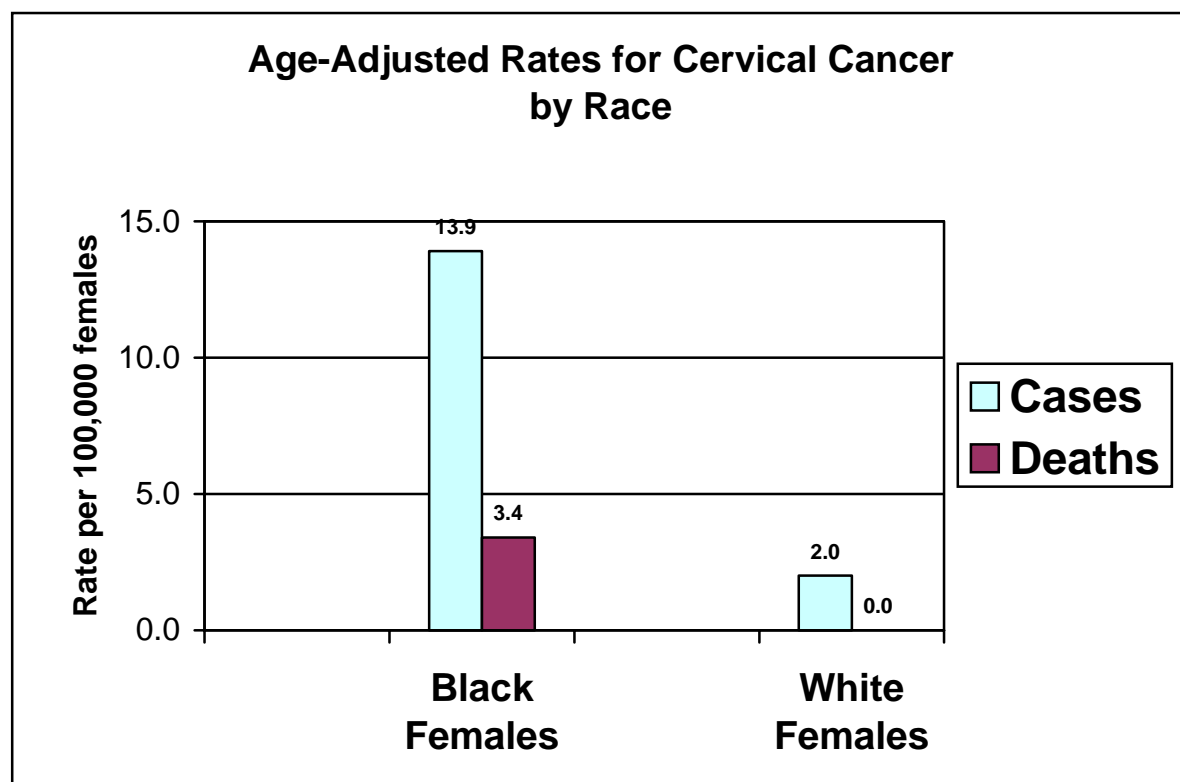
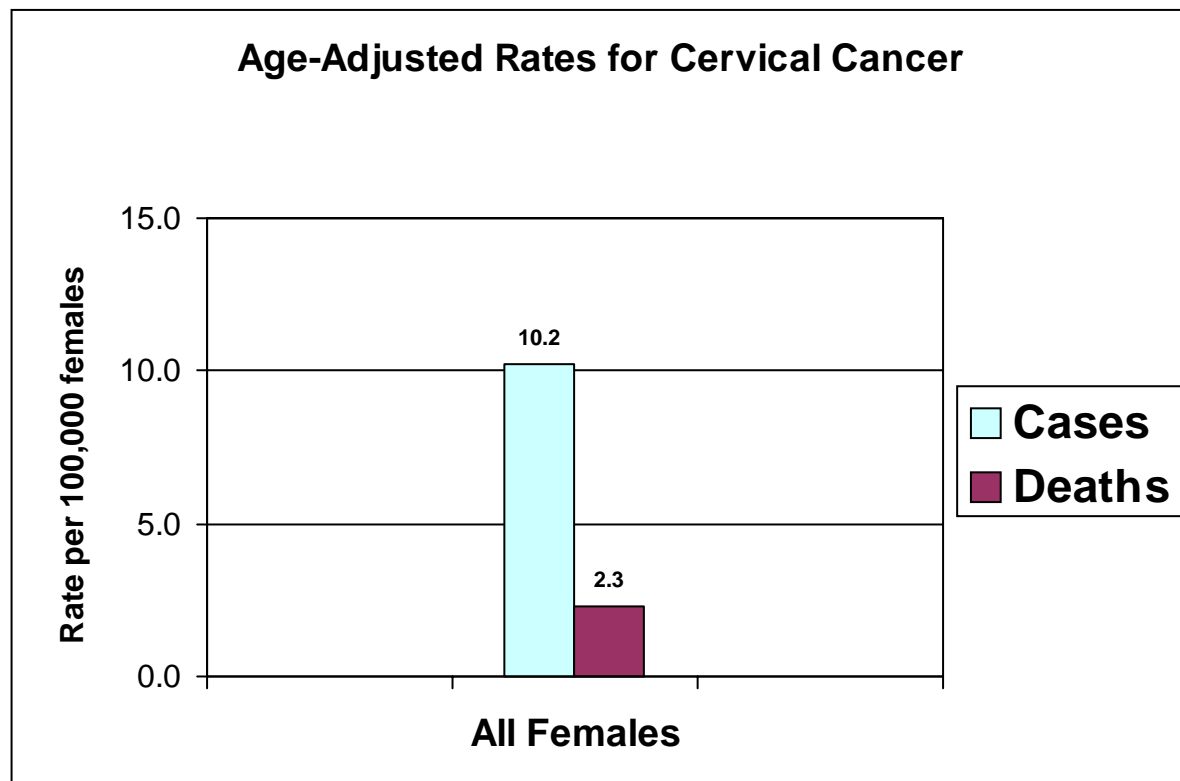
## General Risk Factors

<b>Smoking</b>	Exposure to cigarette smoke is a known risk factor, although by unknown mechanisms.
<b>Other</b>	Strong risk factors for cervical cancer and its precursors include: a history of genital human papilloma virus (HPV) infection (specifically HPV types 6,18,33,35, or 45) or other sexually transmitted disease, early age at first intercourse (less than 16 years old), a history of multiple sexual partners, and HIV infection.

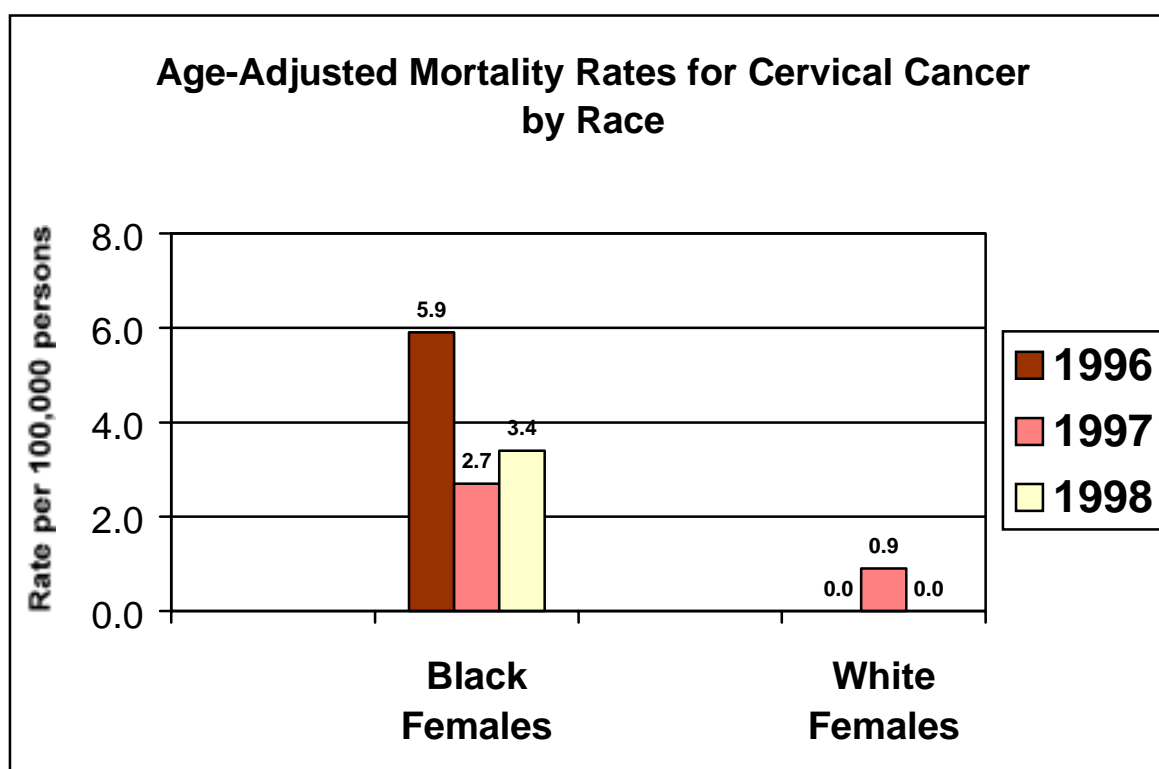
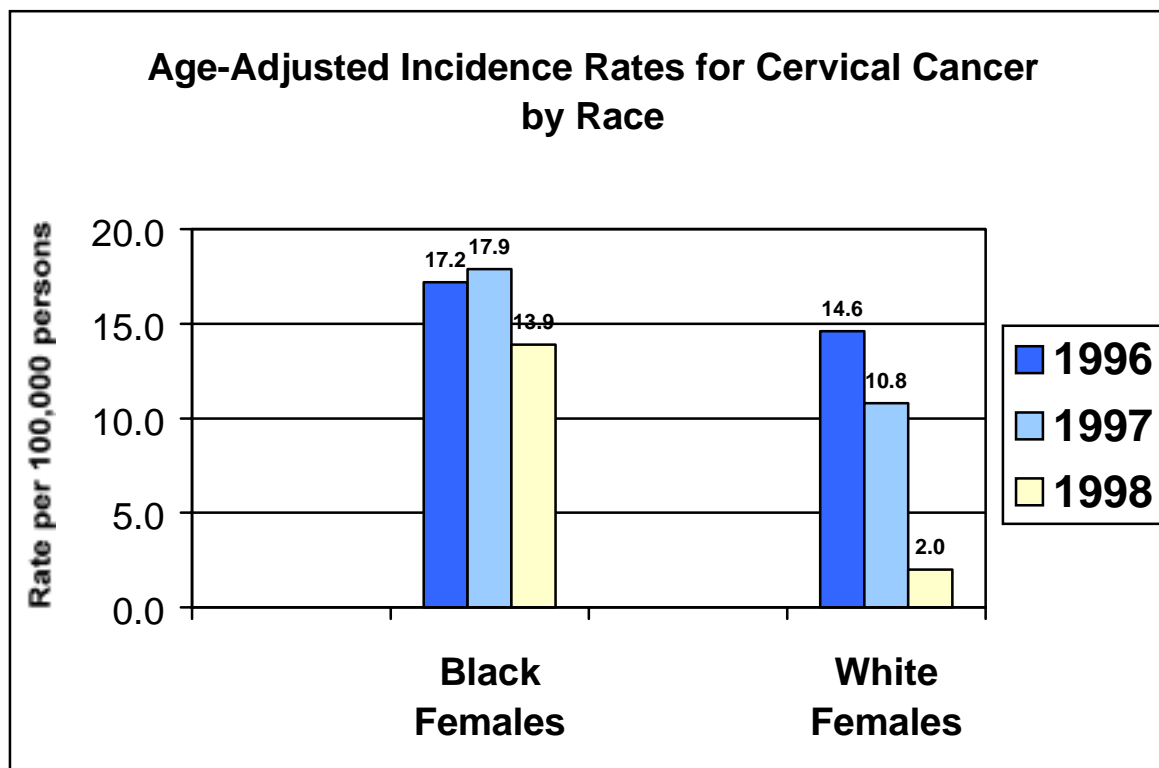
**Fig. 13: 1998 Age-Specific Incidence and Mortality Rates by Race and Gender – Cervical Cancer**



**Fig. 14: 1998 Age-adjusted Cancer Incidence and Mortality Rates for Cervical Cancer by Race**



**Fig. 15: 1996 to 1998 Trends in Age-Adjusted Cancer Incidence and Mortality Rates by Race – Cervical Cancer**

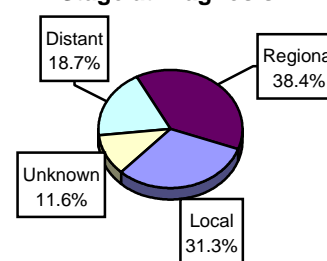


# Colon/(excluding rectum)

## Incidence and Mortality Summary

Age-adjusted incidence rate per 100,000	Male	Female	Total
DCCR	39.8	38.5	38.7
SEER	35.2	28.2	31.2
Total # of new cases	110	157	268
# of deaths	53	58	111
Incidence rate: 38.7 (95% confidence interval: 33.9-43.4)			
Incidence rates by wards: Mean: 38.5 Median: 32.2			
Range: 22.0-62.5/100,000			

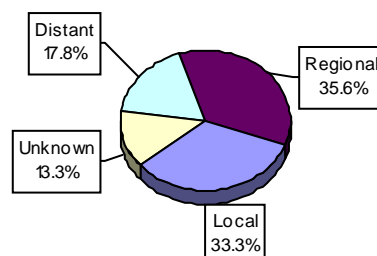
Stage at Diagnosis



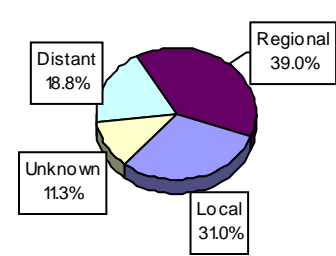
## Total Cases and Deaths by Ward

Ward	Cases	Deaths
Ward 1	24	17
Ward 2	24	9
Ward 3	23	10
Ward 4	45	18
Ward 5	52	22
Ward 6	28	13
Ward 7	47	13
Ward 8	21	9
Unknown	4	0

White



Black



## Description

**Incidence** Colon cancer incidence in DC, 38.7/100,000, is significantly higher than SEER. Wards have a 2.8-fold difference in rates at the extremes.

**Mortality** SEER reports combine colon and rectal cancer data for mortality. Lesions that arise at the termination of the colon versus the beginning of the rectum are difficult to distinguish. The overall rates indicate that mortality from these cancers in DC is almost equal to that of US despite the high incidence. Ward 5 has both the highest incidence and mortality for this cancer.

**Age** Some cases of colon cancer have been reported in children, but the major increase in this cancer does not occur until after age 45 and continues to oldest age groups.

**Race & Gender** The risk of colon cancer is equal in males and females in DC, whereas rectal cancer occurs 43 percent more often in males than females. Black DC residents have a 2.1-fold higher risk of colon cancer whereas SEER data suggest an almost equal risk by race. The black population of DC has a significantly higher risk of this cancer compared to SEER whereas the white population has a significantly lower risk than reported in SEER. In males, the ratio is almost 3 times higher and in females 1.7 times higher in blacks than whites and both genders have significantly higher rates than SEER. The significantly low rate in whites in DC compared to SEER is due solely to a significantly low risk in white males.

The mortality data indicate about a 1.5-fold excess mortality for blacks versus whites in DC for both genders and only a slightly lower ratio than reported for US data on combined colon/rectum rates. Thus, although mortality is similar by race to US, incidence rates are much higher in blacks in DC. Several explanations for this excess incidence for blacks are possible, such as increased

screening in blacks in recent years, resulting in better case ascertainment especially with multiple cancers, a recent change in the rate of disease, or reduced mortality in blacks after diagnosis in DC.

- I/M ratio** The I/M ratios for colon cancer are about 2.6 in black and 2.0 in whites in DC. SEER data combining colon and rectum data indicate a ratio of 2 in blacks and 2.6 in whites. High incidence in blacks explains this reversal in ratios.
- Trends** SEER data suggest a decline in incidence for both race and gender groups. DC data suggest declines for males of both races; females do not show similar declines.
- Stage** DC has 11% fewer cancers detected at localized stages than in the US data. Late detection of cancer is common for both races in DC compared to the US. The later stage of lesions in DC residents make it unlikely that the high incidence is due to increased screening in the population.

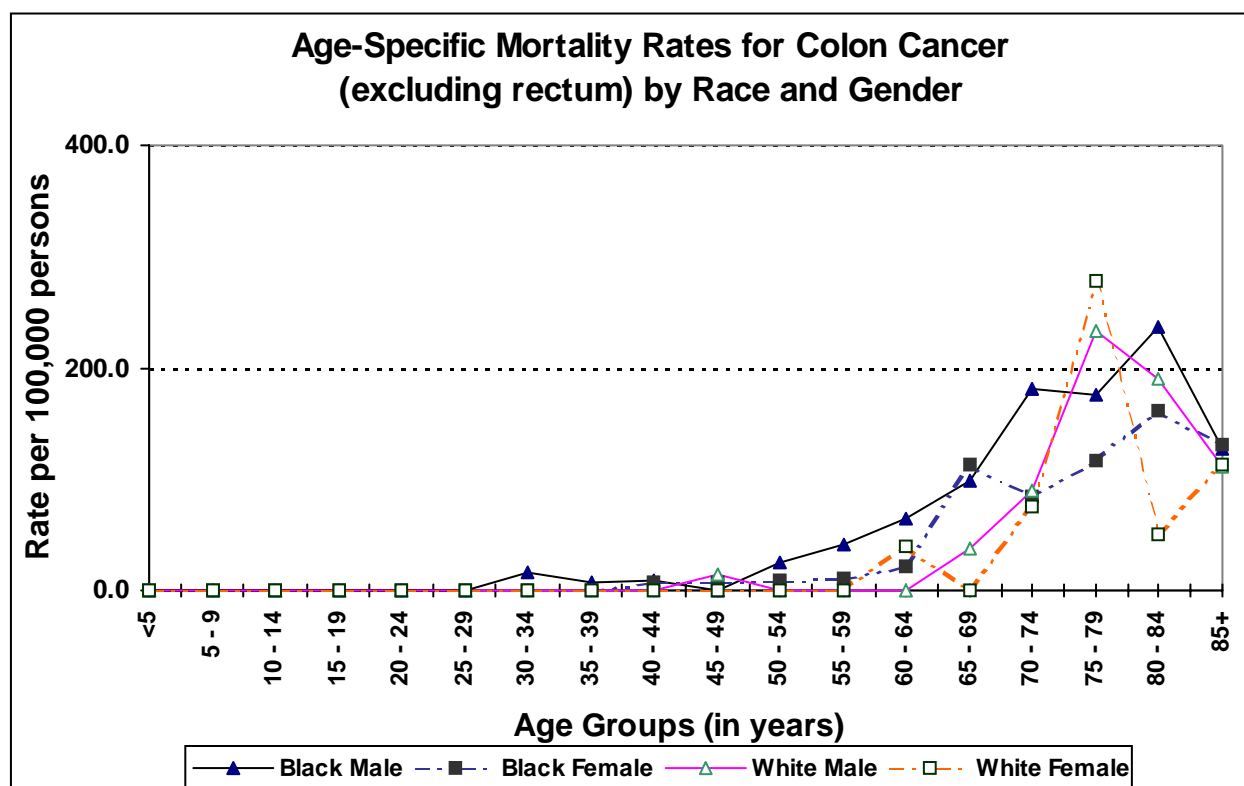
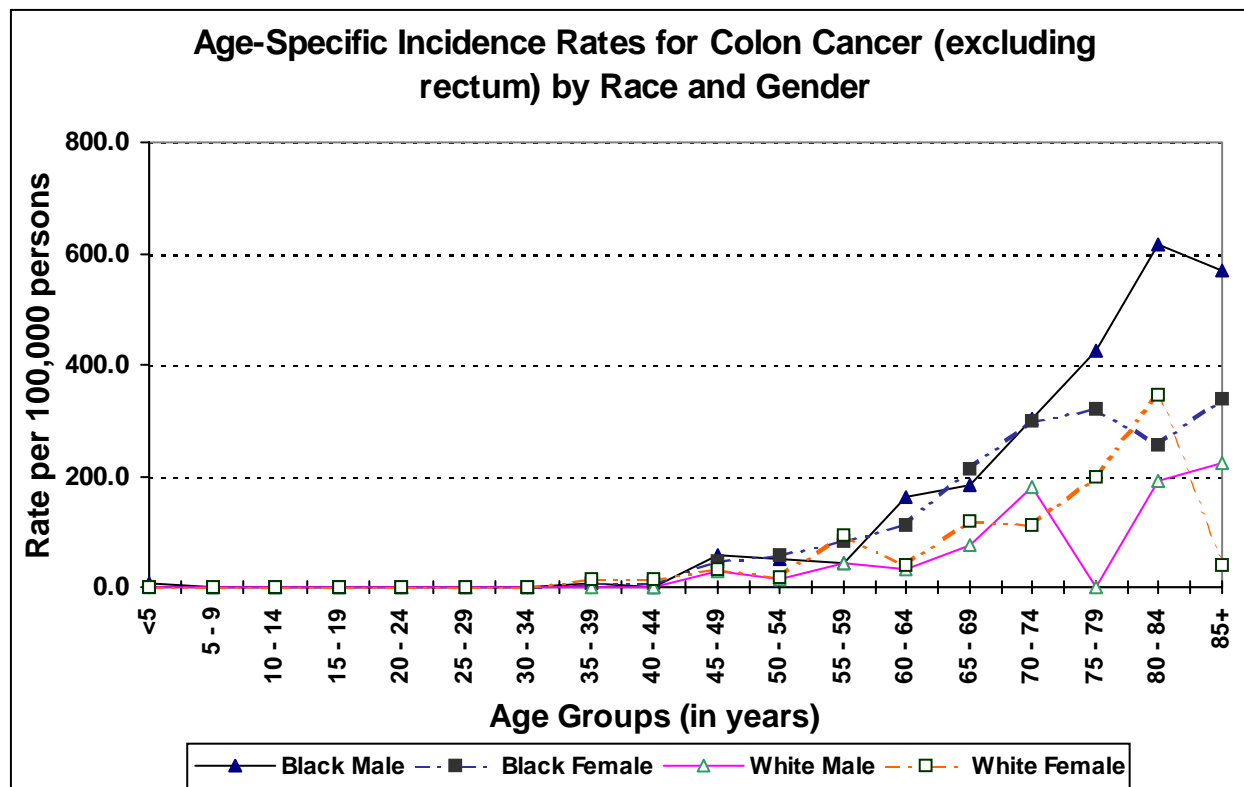
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### General Risk Factors

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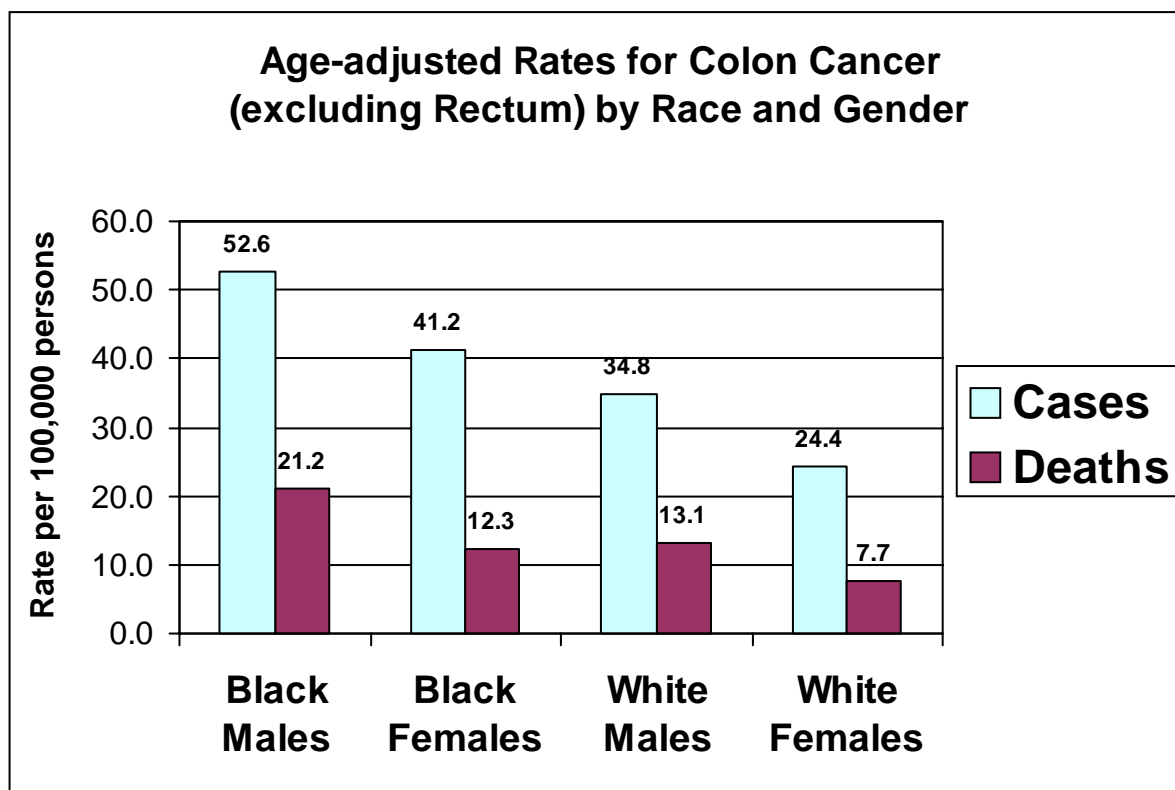
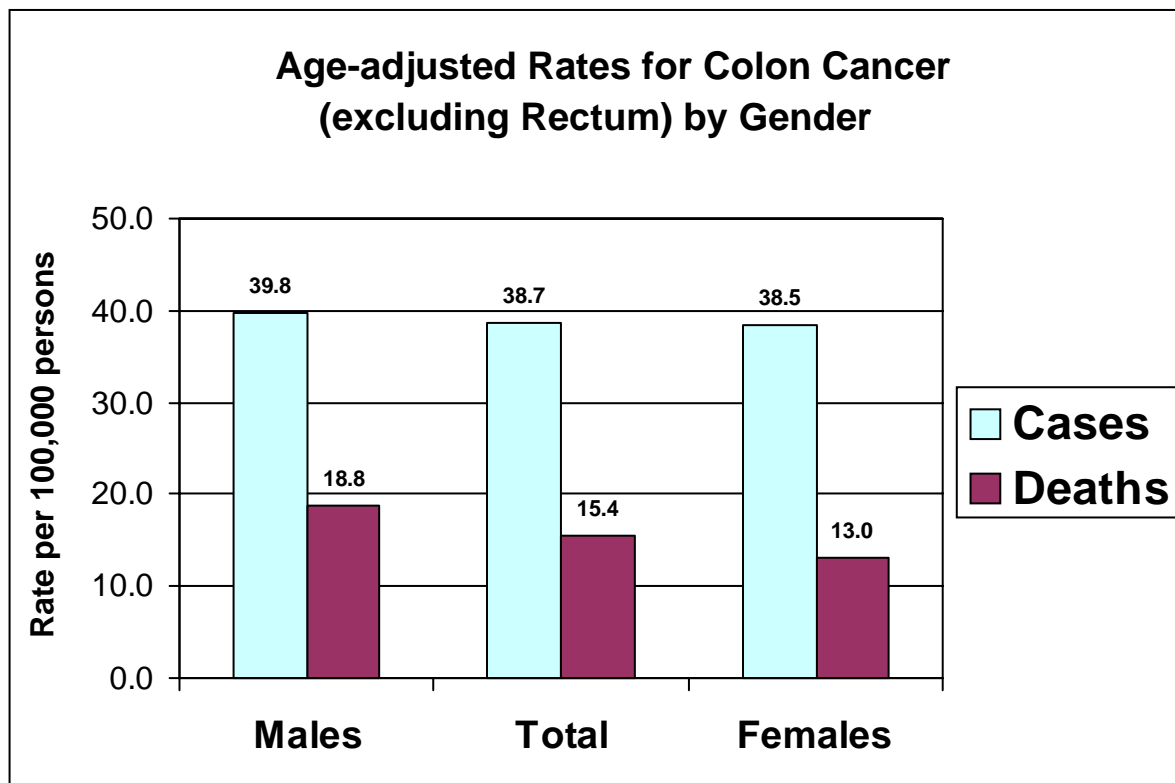
- Diet** Evidence indicates that diets high in fat or low in fiber contribute to increased risk of colon cancer.
- Other** Individuals with a close family history of this cancer and those with a personal history of certain other cancers or conditions (i.e. ulcerative colitis or Crohn's colitis) are at increased risk. Regular, moderate physical activity is associated with lower rates of this cancer.
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**Fig. 16: 1998 Age-Specific Incidence and Mortality Rates by Race and Gender – Colon Cancer (excluding rectum)**

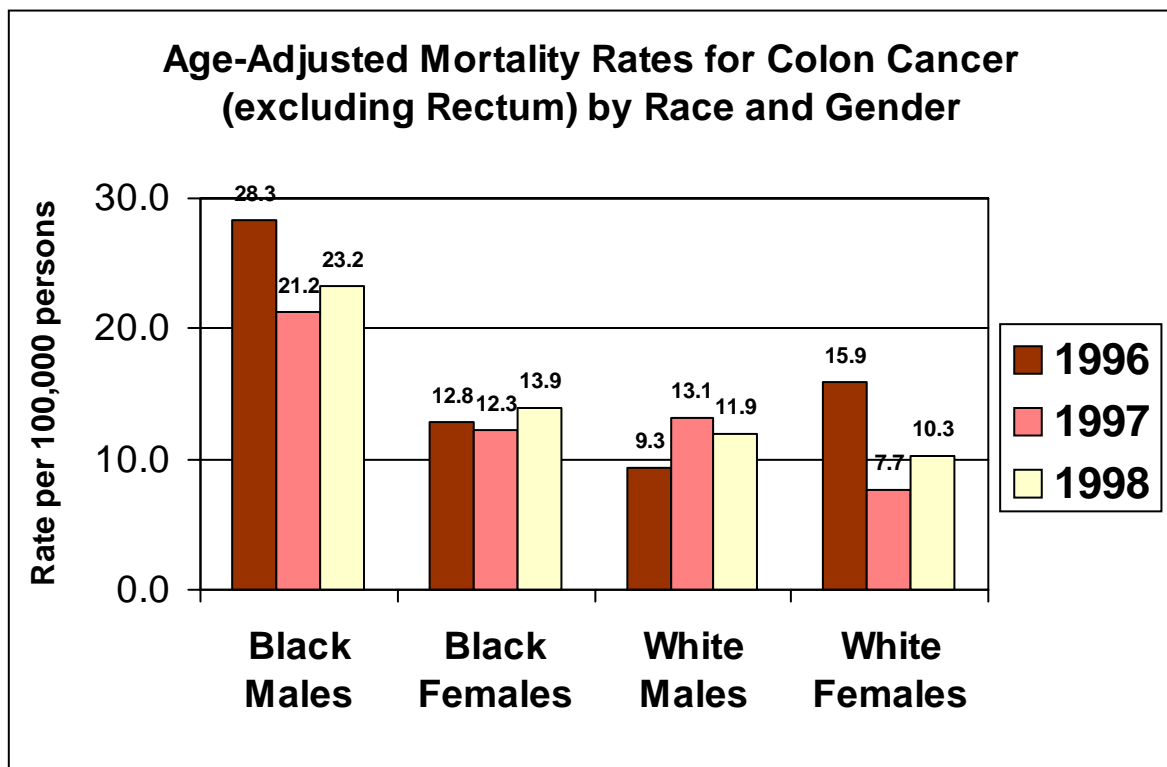
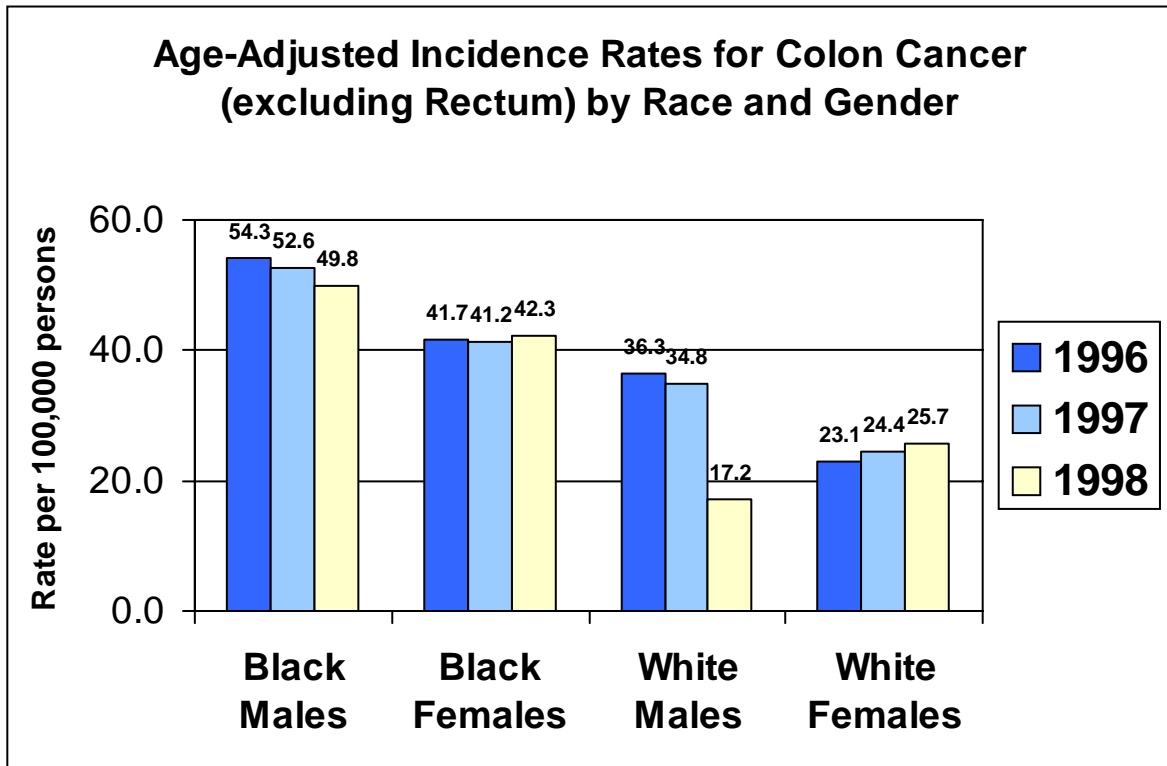




**Fig. 17: 1998 Age-adjusted Cancer Incidence and Mortality Rates for Colon Cancer (excluding Rectum) by Race and Sex**



**Fig. 18: 1996 to 1998 Trends in Age-Adjusted Cancer Incidence and Mortality Rates by Race and Sex – Colon Cancer (excl. Rectum)**

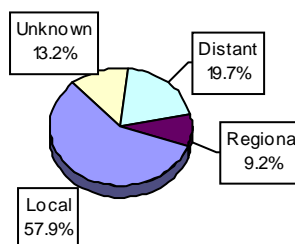


# Endometrium

## Incidence and Mortality Summary

Age-adjusted incidence rate per 100,000	Male	Female	Total
DCCR	-	21.1	
SEER	-	21.9	
Total # of new cases	-	76	76
# of deaths	-	22	22
Incidence rate: 21.1(95% confidence interval: 16.2 - 25.9)			
Incidence rates by wards: Mean:20.4 Median:18.4			
Range: 6.5 - 34.6/100,000			

Stage at Diagnosis



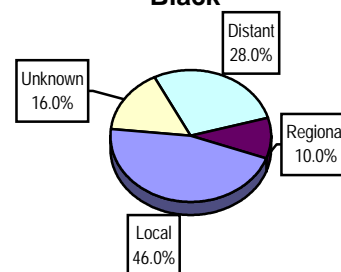
## Total Cases and Deaths by Ward

Ward 1	8	3
Ward 2	9	2
Ward 3	8	1
Ward 4	10	5
Ward 5	16	3
Ward 6	8	4
Ward 7	12	4
Ward 8	3	0
Unknown	2	0

White



Black



## Description

<b>Incidence</b>	Endometrial cancer incidence in DC residents is similar to overall US rate (21.1/100,000 to 21.9/100,000). However, rates by wards differ by 5.3-fold.
<b>Mortality</b>	The Death rate from this cancer is low but mortality in DC is higher than reported for the US.
<b>Age</b>	Most cases do not appear until ages 50-54 years after which incidence rates rise with increasing age to peak at ages 70-74 and fall thereafter.
<b>Race &amp; Gender</b>	Black and white women in DC have equal rates of endometrial cancer whereas the SEER rates are higher for whites than blacks. Overall incidence is higher than each rate by racial group primarily because of cases of unknown race. However, the death rate for this cancer is 3 times higher in black compared to white women. This difference is greater than the 1.9 seen in US data.
<b>I/M ratio</b>	Endometrial cancer generally has a good survival rate and that is reflected by a high incidence/mortality ratio in DC white females of 8.4, a value similar to that calculated from SEER data. The ratio for blacks is much lower, 2.6, and exactly the same as US ratios. Thus black females compared to whites in DC have poorer survival from endometrial cancer, and they have both a higher incidence and mortality than for US blacks.
<b>Trends</b>	US data suggest that rates for this cancer have been stable over past five years and recent years in DC suggest that the experience is similar, although numbers are small for each year.

**Stage** Endometrial cancer is usually identified in a localized stage because of early symptoms. Thus 73 percent of cases in the US data are localized at diagnosis. However, DC residents show only 58 percent localized lesions and the difference is solely due to the detection of later stage lesions in black females. Although data are not available for DC, the US five-year relative survival rates for localized lesions in white women is 96 percent whereas for black women it is only 80 percent. If these survival rates apply for DC residents, it would explain the low I/M ratio in black women.

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### General Risk Factors

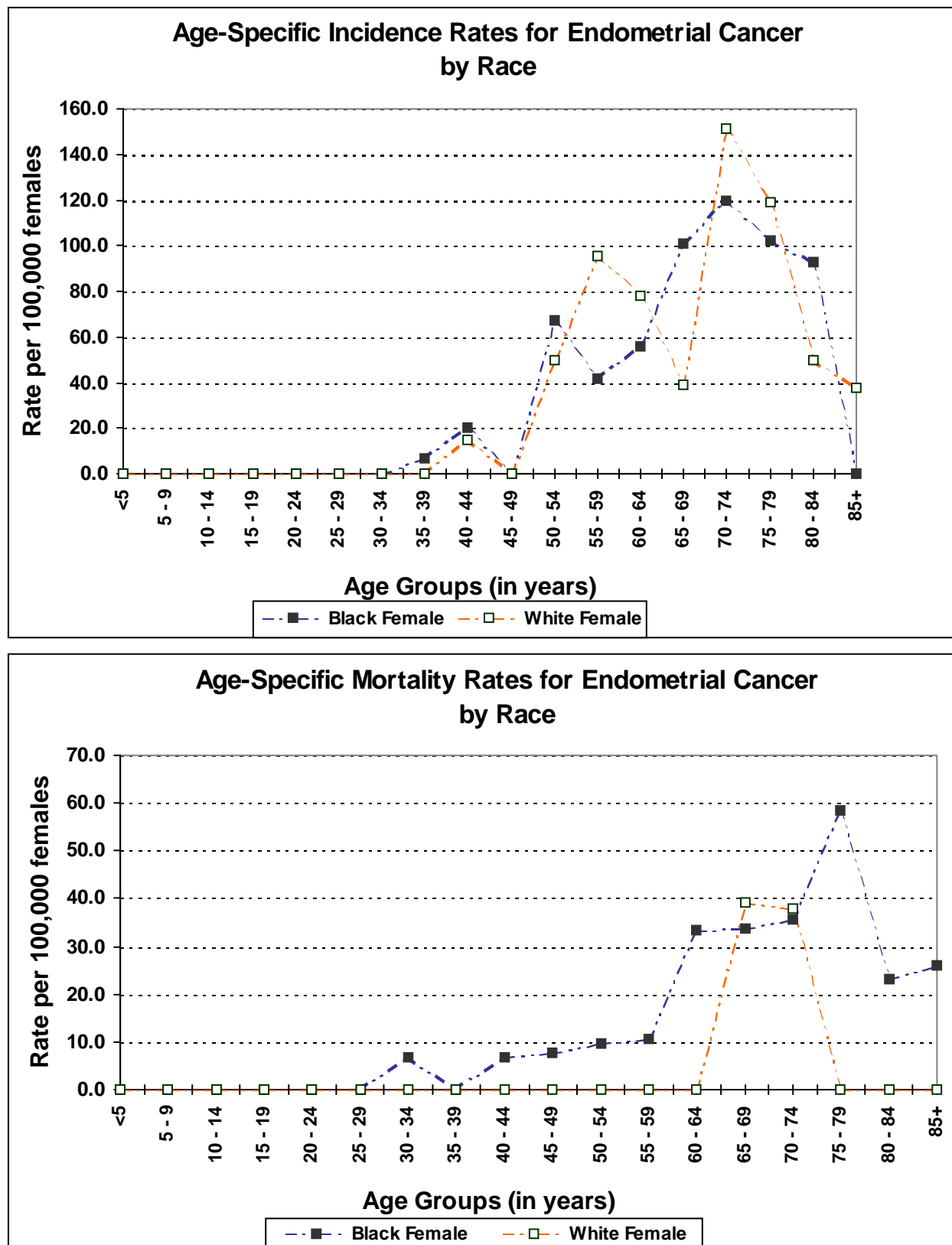
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**Diet** Dietary fat may play a role in increased risk. Obesity and hypertension are commonly associated with this cancer.

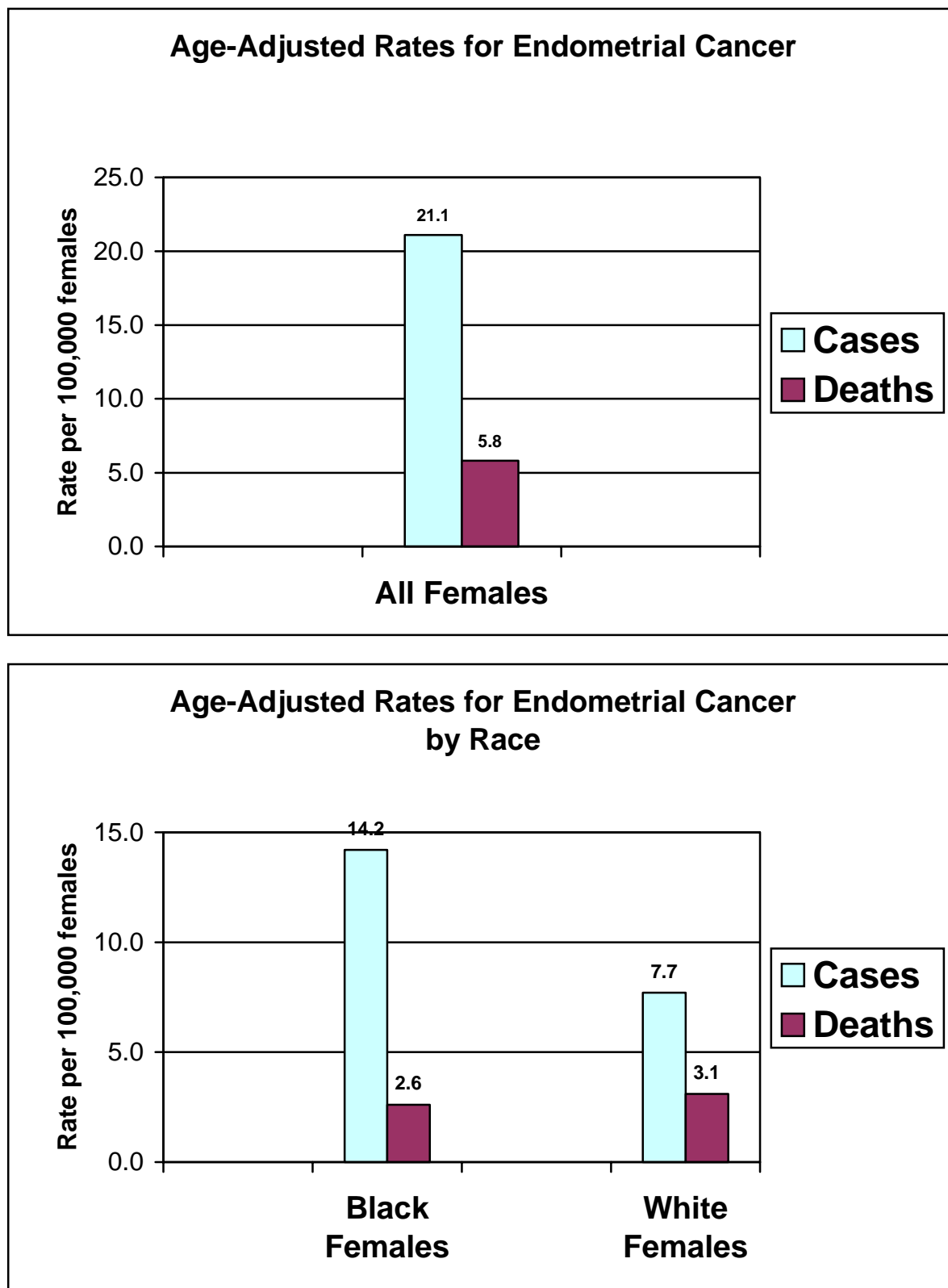
**Hormonal** Factors that elevate levels of estrogen or decrease progesterone levels enhance the risk. Women who have never carried a pregnancy to term are at a relatively high risk. The risk decreases as the number of pregnancies increases. An increased incidence of endometrial cancer has been found in association with prolonged, unopposed estrogen exposure as well as with tamoxifen treatment of breast cancer.

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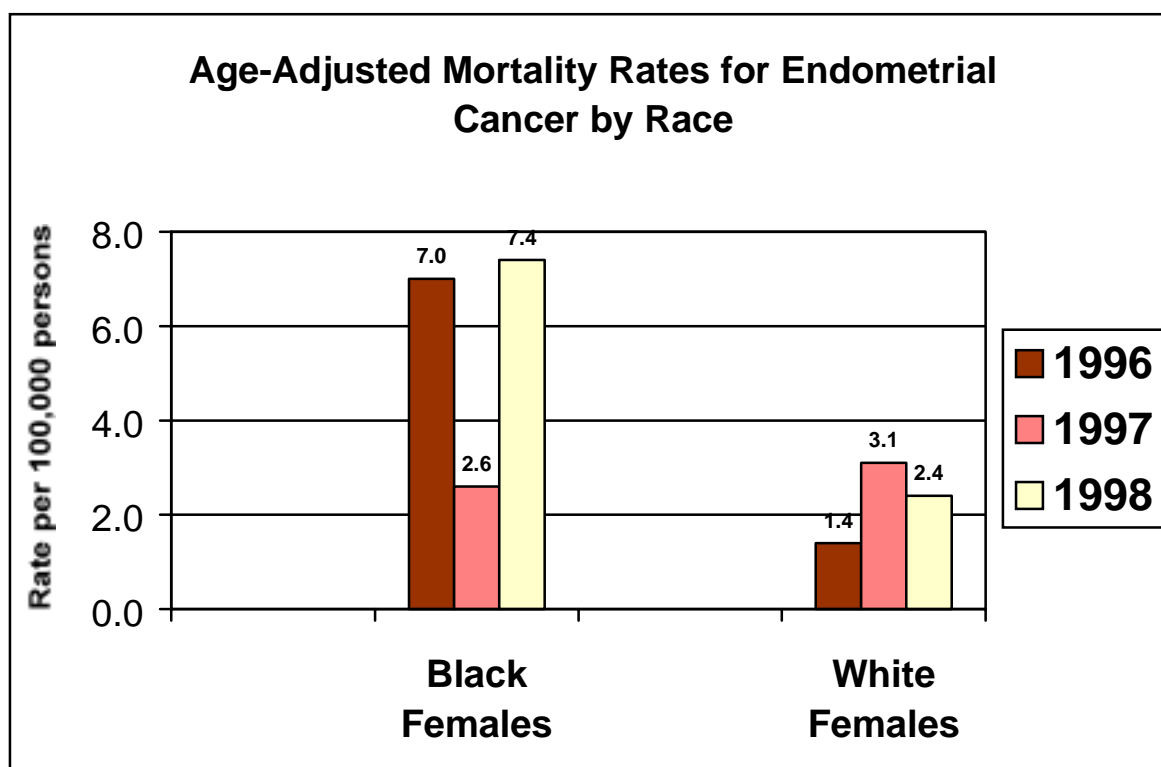
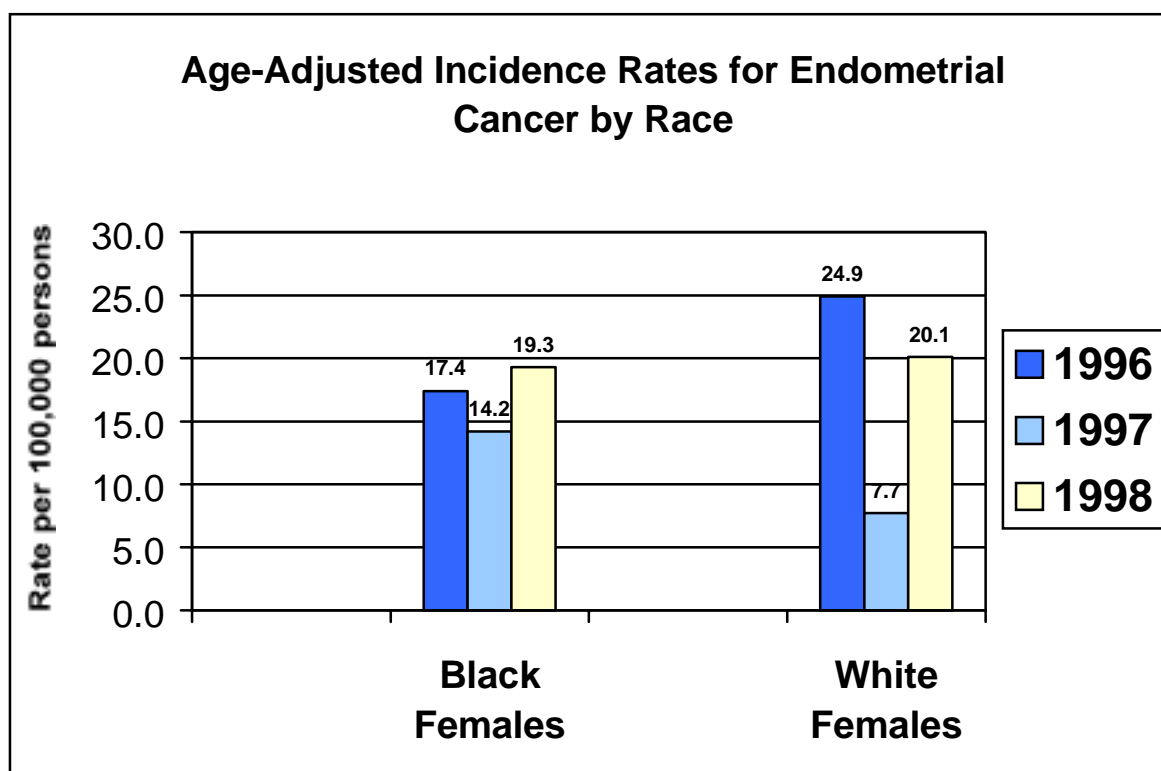
**Fig. 19: 1998 Age-Specific Incidence and Mortality Rates by Race – Endometrial Cancer**



**Fig. 20: 1998 Age-adjusted Cancer Incidence and Mortality Rates for Endometrial Cancer by Race**



**Fig. 21: 1996 to 1998 Trends in Age-Adjusted Cancer Incidence and Mortality Rates by Race – Endometrial Cancer**

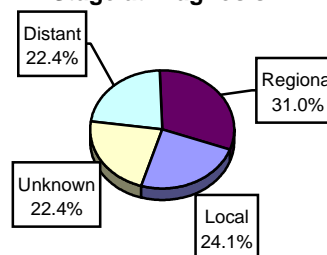


# Esophagus

## Incidence and Mortality Summary

Age-adjusted incidence rate per 100,000	Male	Female	Total
DCCR	15.1	4.6	9.2
SEER	6.7	1.6	3.9
Total # of new cases	40	18	58
# of deaths	25	13	38
Incidence rate: 9.2 (95% confidence interval: 6.8-11.6)			
Incidence rates by wards: Mean: 9.2 Median: 8.7			
Range: 4.6-16.5/100,000			

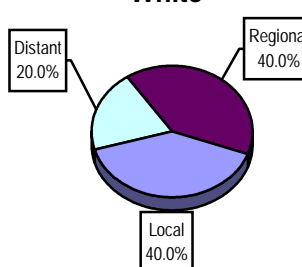
Stage at Diagnosis



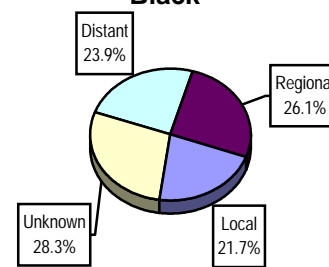
## Total Cases and Deaths by Ward

Ward	Cases	Deaths
Ward 1	10	2
Ward 2	4	4
Ward 3	6	5
Ward 4	4	10
Ward 5	12	5
Ward 6	9	6
Ward 7	6	1
Ward 8	7	4
Unknown	0	1

White



Black



## Description

<b>Incidence</b>	Esophageal cancer incidence in DC is 9.2/100,000, a rate about 2.4 times above the US. The numbers are small by ward but the ratio of rates by wards in 3.6-fold from the lowest to highest.
<b>Mortality</b>	The death rate in DC, 6.0/100,000, is 1.5-fold higher than in the US, and is significantly high.
<b>Age</b>	Cases occur beginning at 40-44 years of age and rates increase with increasing age. Cases begin at ages 15 years earlier in blacks than whites.
<b>Race &amp; Gender</b>	DC males have 3.3 times greater risk of this cancer than females with a similar ratio for mortality rates by gender. Blacks have a two-fold higher incidence rate than whites and the ratio is higher in females although numbers are small. Compared to SEER rates, the incidence rate for each race-sex group is about 1.5 times higher in DC except for white females, but the differences are not significant. Thus, the significantly high incidence rate for this cancer in DC compared to SEER is due both to a true higher incidence rate for each race and a higher proportion of African-Americans to whites in the city compared to the US and this group have a higher risk of this cancer.
<b>I/M ratio</b>	The incidence is about 1.4 to 2.4 times higher than mortality rates for each race-gender group. (White female case numbers are too few to evaluate.) Black males have the lowest ratio. SEER ratios are about 1.2 for each group.
<b>Trends</b>	Cases in each year are too few to determine trends in each race gender group. Recently, US rates have been declining.

**Stage** For cases in DC, 24 percent are diagnosed at a localized stage, 31 percent



regional, 22 percent distant and 22 percent unstaged. These figures are similar to the U.S. data that report one-quarter of cases in each of the four categories. The number of cases in whites are too few to compare the stage distribution by race.

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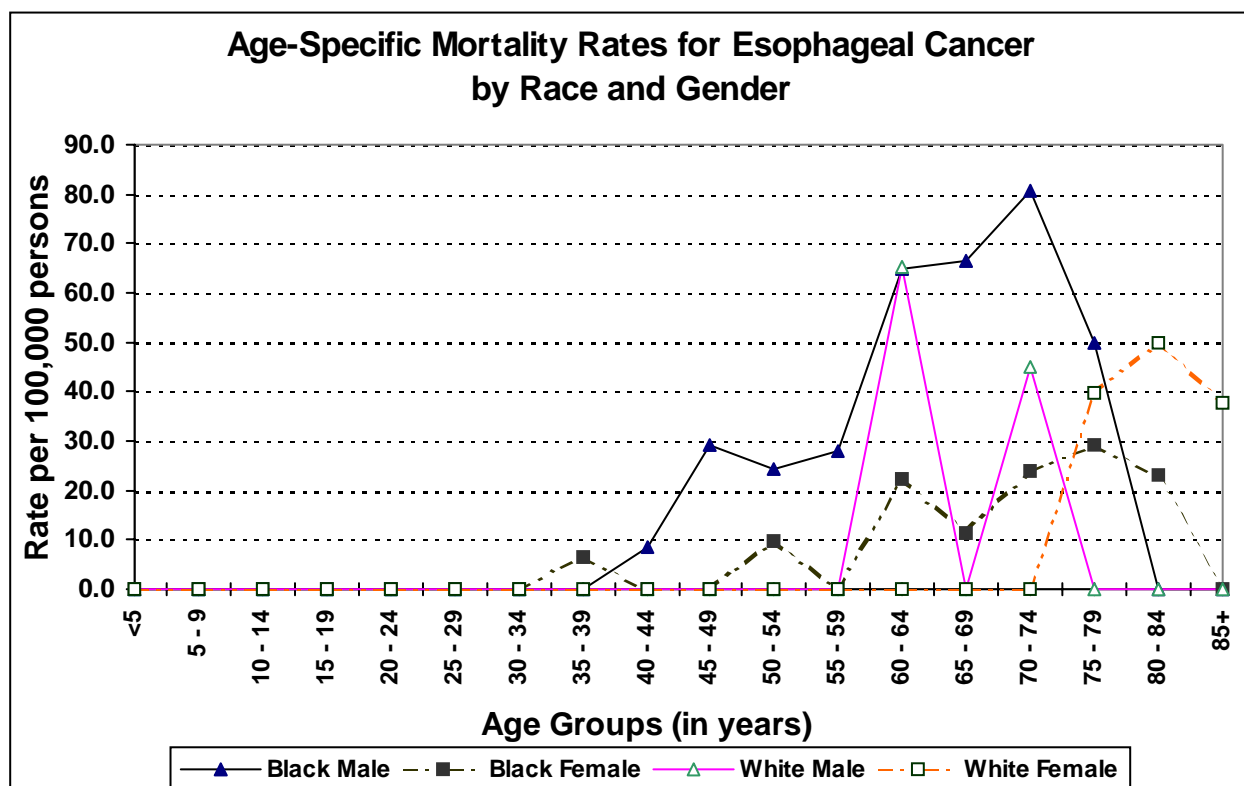
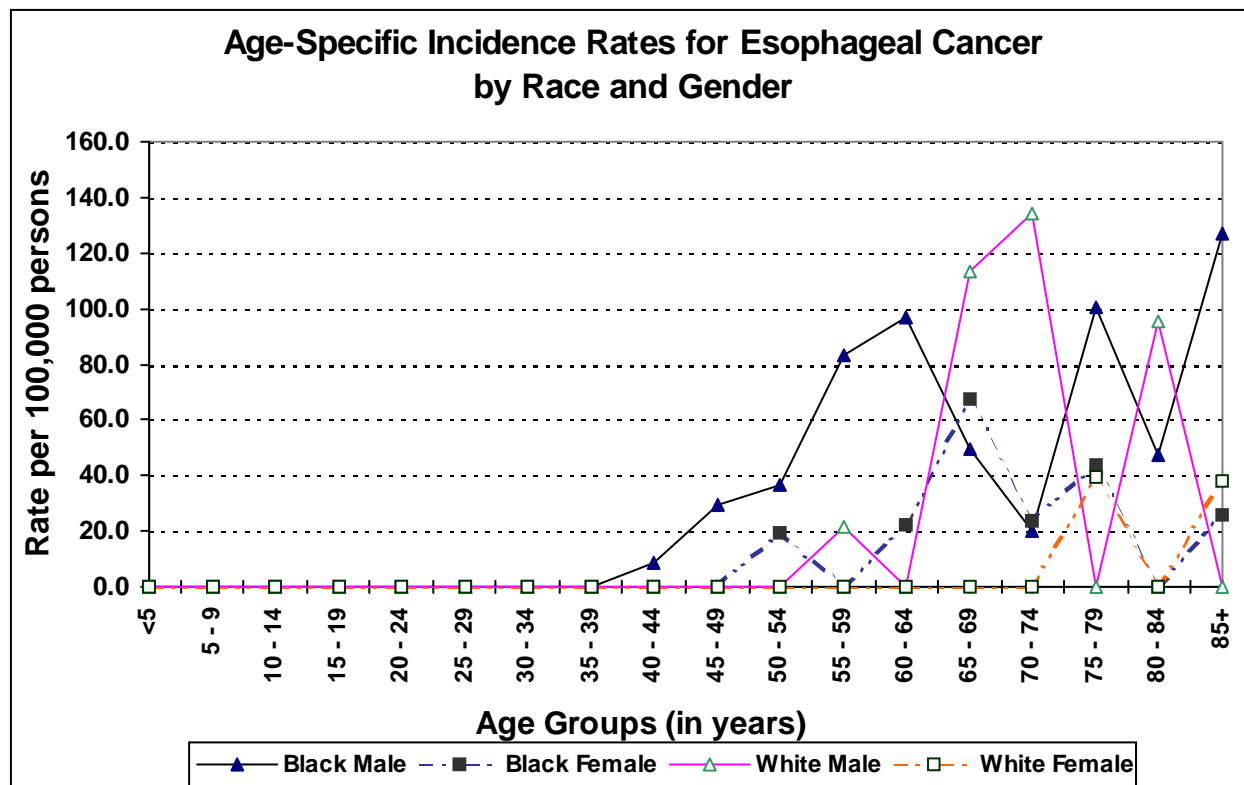
### General Risk Factors

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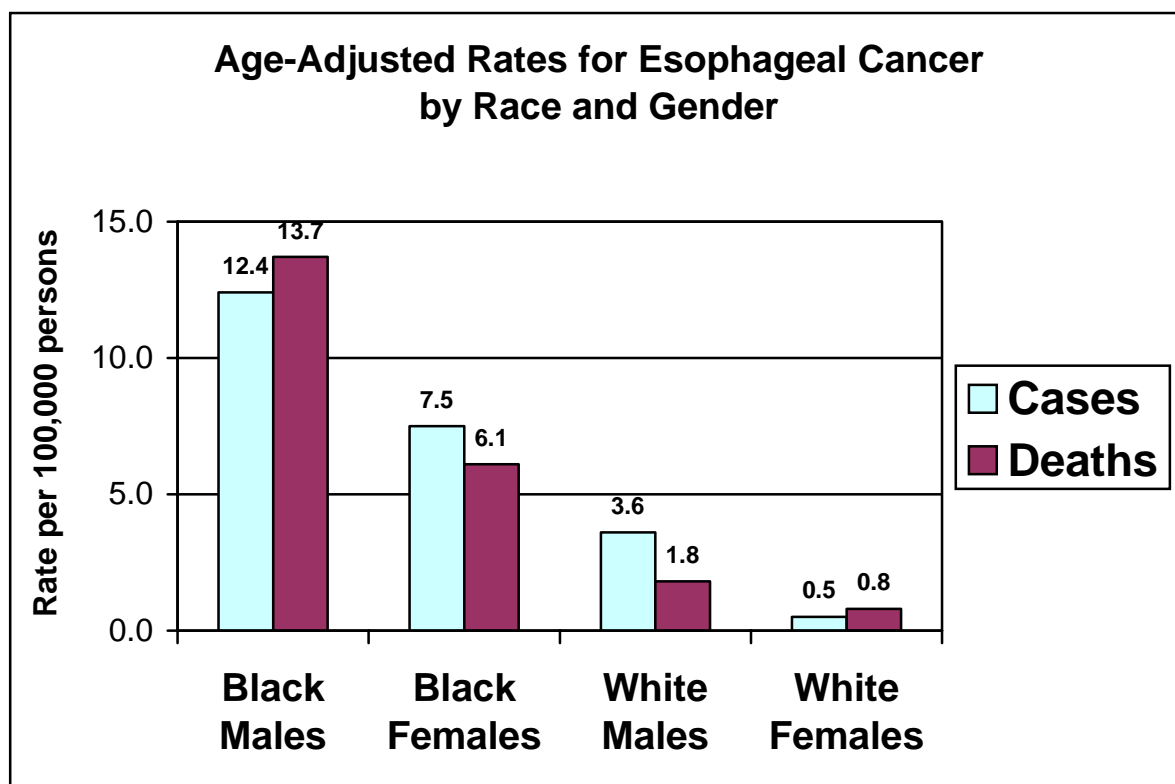
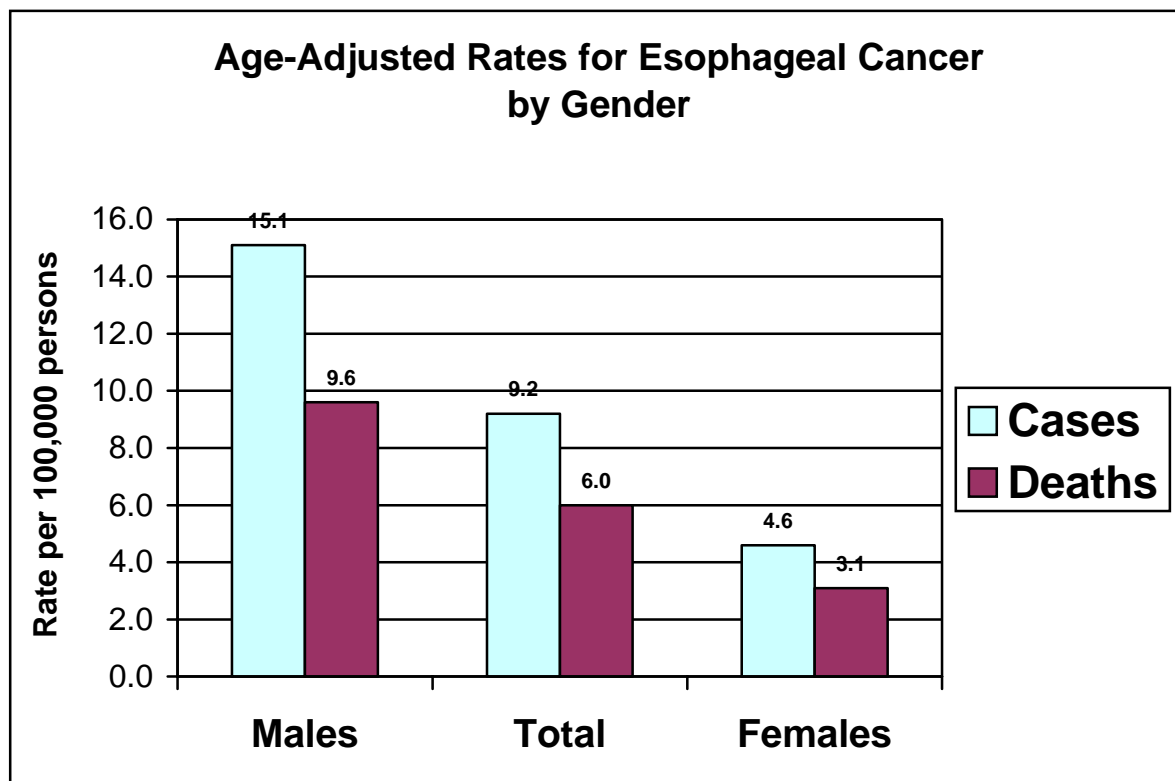
<b>Smoking</b>	Tobacco use, cigarettes or chewing tobacco and heavy alcohol consumption are major risk factors for cancer of the esophagus. The risk is particularly increased when these two factors are both present.
<b>Other</b>	Long standing inflammation, esophagitis, is also thought to be contributory. Recently, two morphologic forms of this cancer have been recognized that seem to have different demographic characteristics. Adenocarcinomas occur at the lower end of the esophagus and are more frequent in young white males, and squamous cell carcinomas occur throughout the esophagus and are associated with the classical risk factors of smoking and alcohol.

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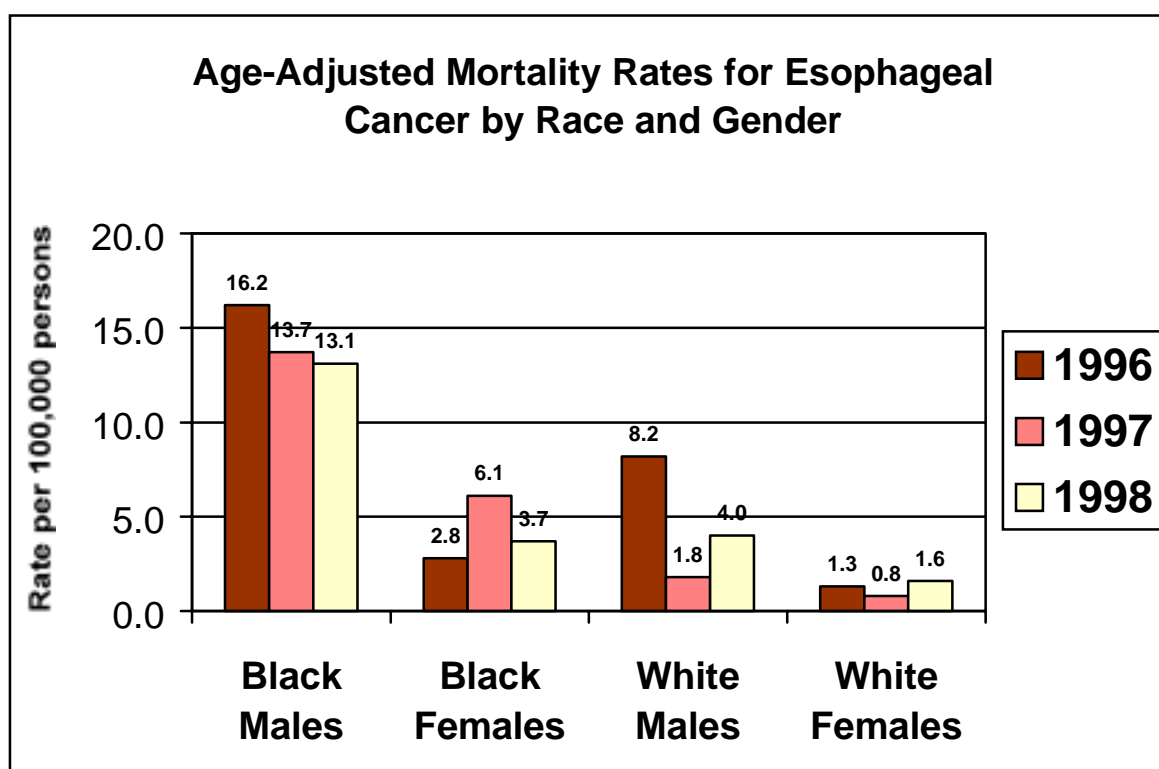
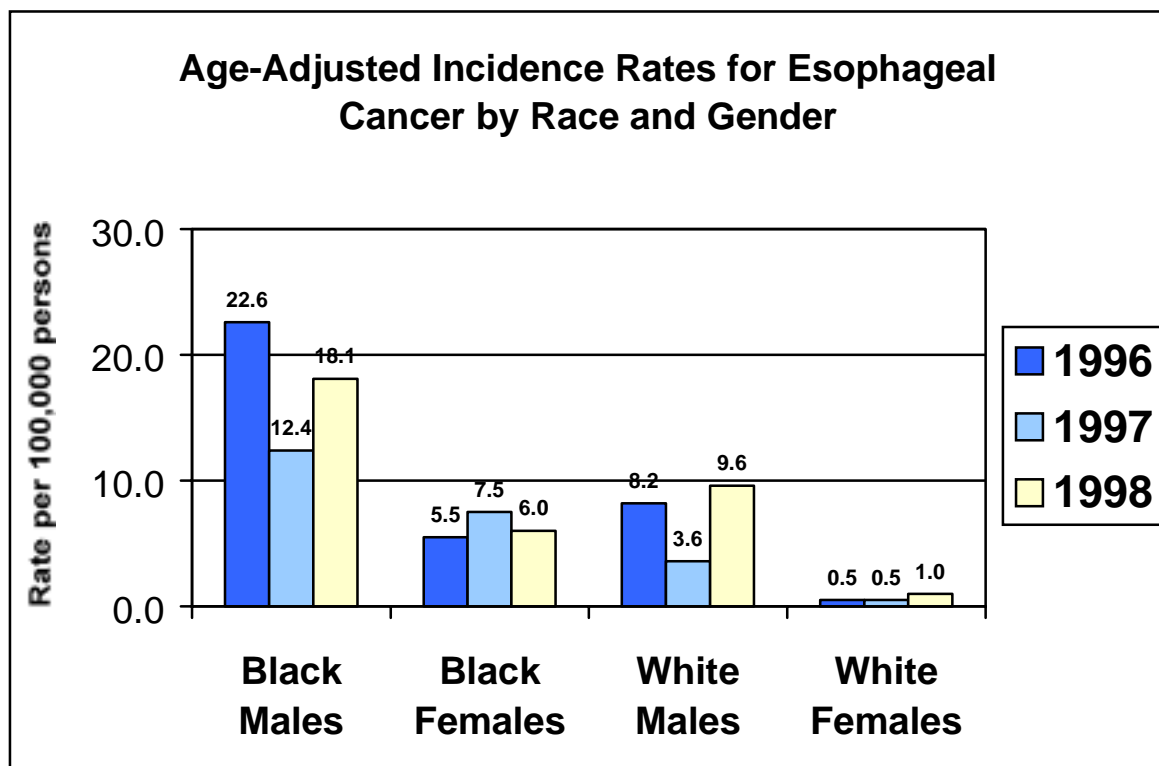
**Fig. 22: 1998 Age-Specific Incidence and Mortality Rates by Race and Gender – Esophageal Cancer**



**Fig. 23: 1998 Age-adjusted Cancer Incidence and Mortality Rates for Esophageal Cancer by Race and Sex**



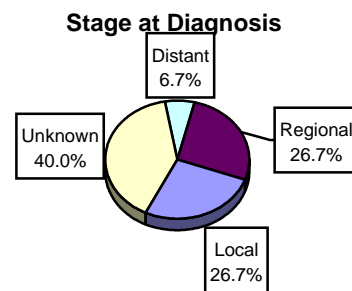
**Fig. 24: 1996 to 1998 Trends in Age-Adjusted Cancer Incidence and Mortality Rates by Race and Sex – Esophageal Cancer**



# Hodgkin's Lymphoma

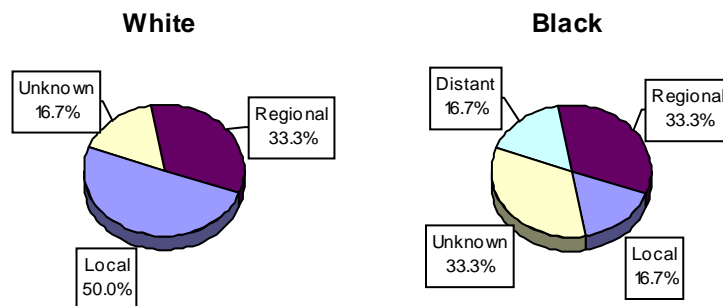
## Incidence and Mortality Summary

Age-adjusted incidence rate per 100,000	Male	Female	Total
DCCR	2.7	2.2	2.4
SEER	2.8	2.4	2.6
Total # of new cases	8	7	15
# of deaths	2	3	5
Incidence rate: 2.4 (95% confidence interval: 1.1 – 3.8)			
Incidence rates by wards: Mean: 3.3 Median: 3.6			
Range: 1.0 – 5.5 /100,000			



## Total Cases and Deaths by Ward

Ward	Cases	Deaths
Ward 1	3	0
Ward 2	0	0
Ward 3	3	2
Ward 4	4	0
Ward 5	1	1
Ward 6	3	0
Ward 7	0	1
Ward 8	1	0
Unknown	0	1



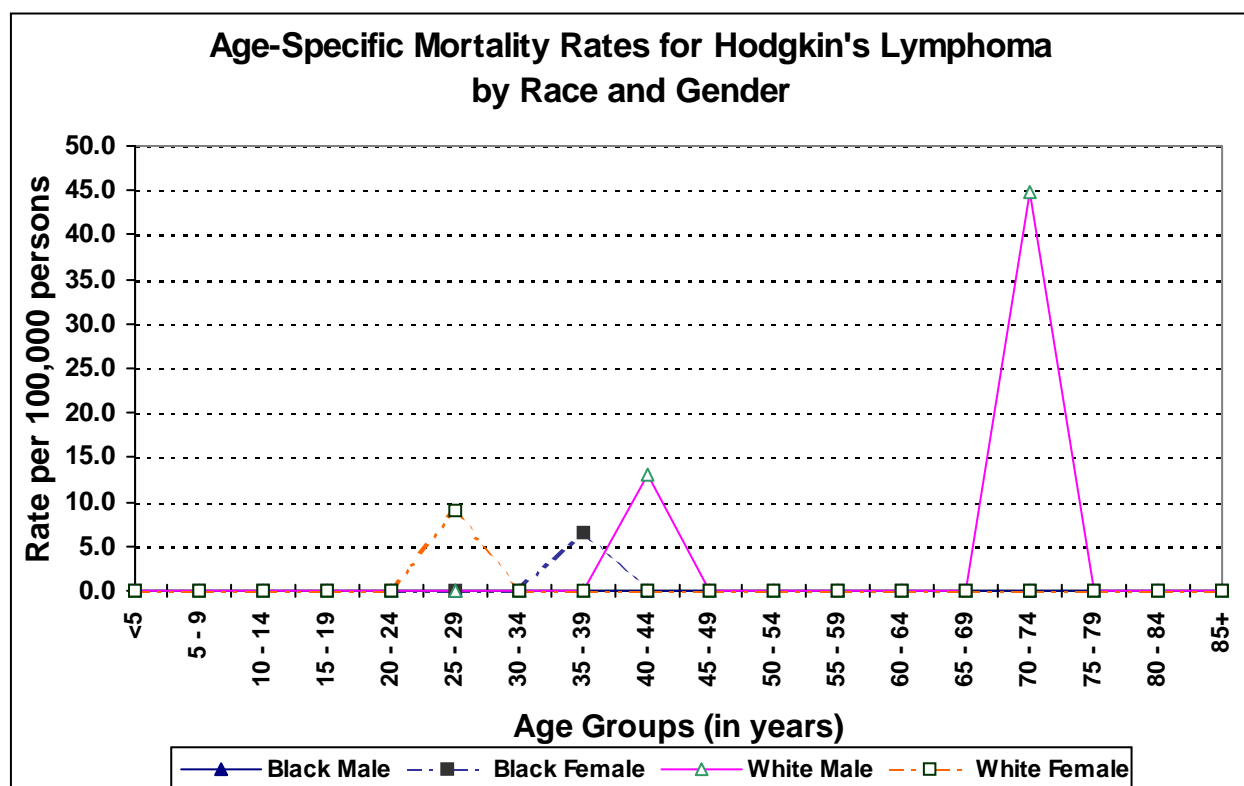
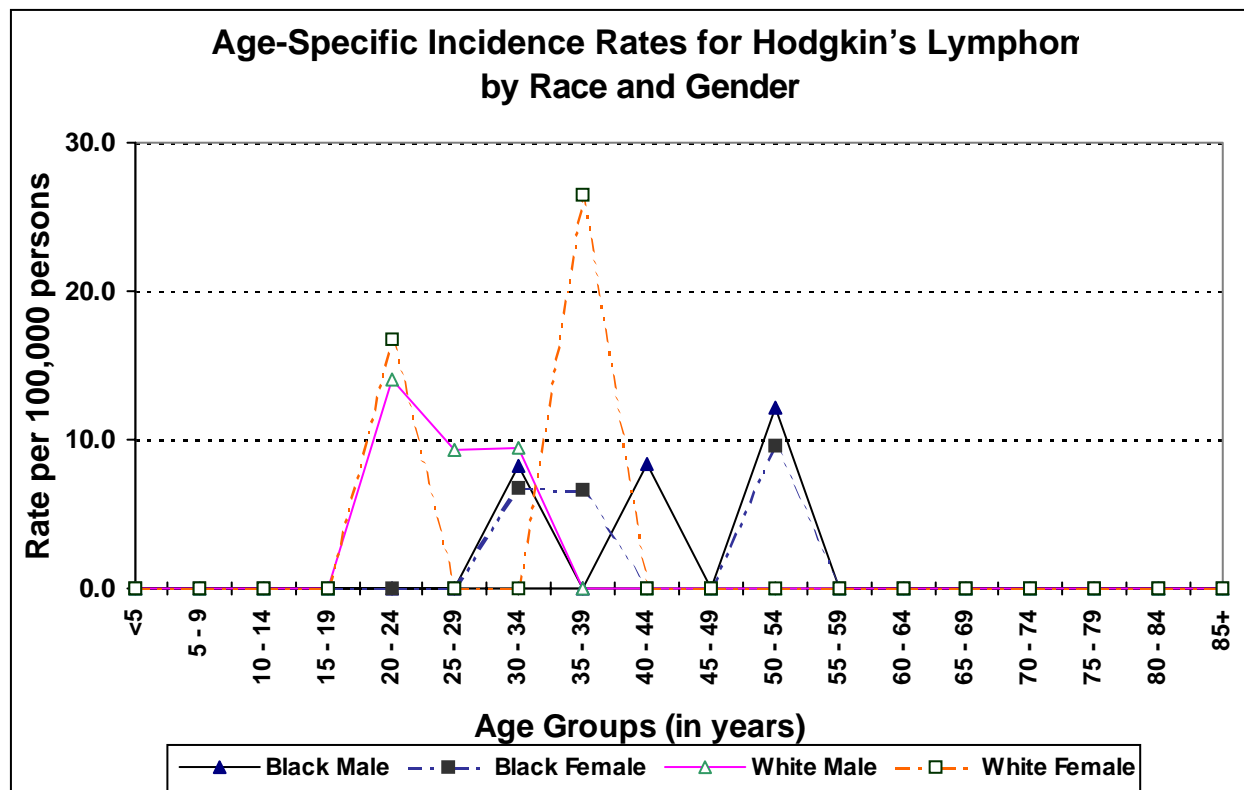
## Description

The number of cases, 15, is too small for analysis. The data suggest that rates of this cancer in DC are similar to those of the US.

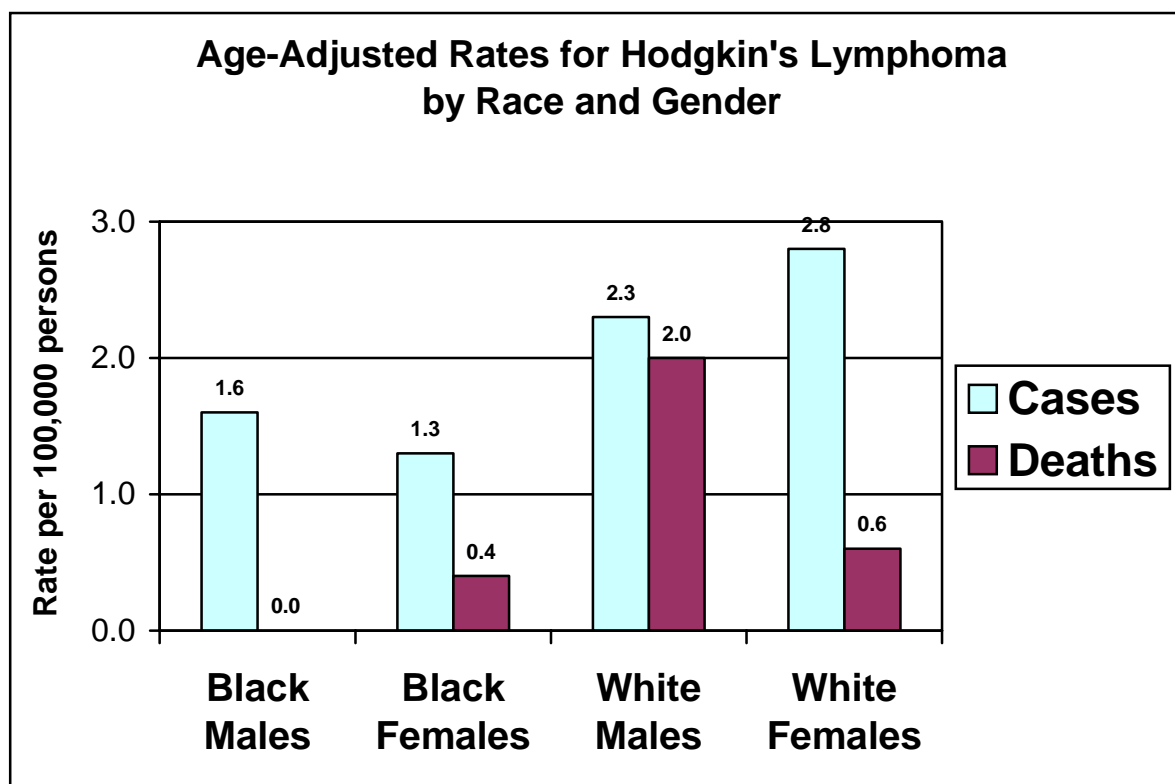
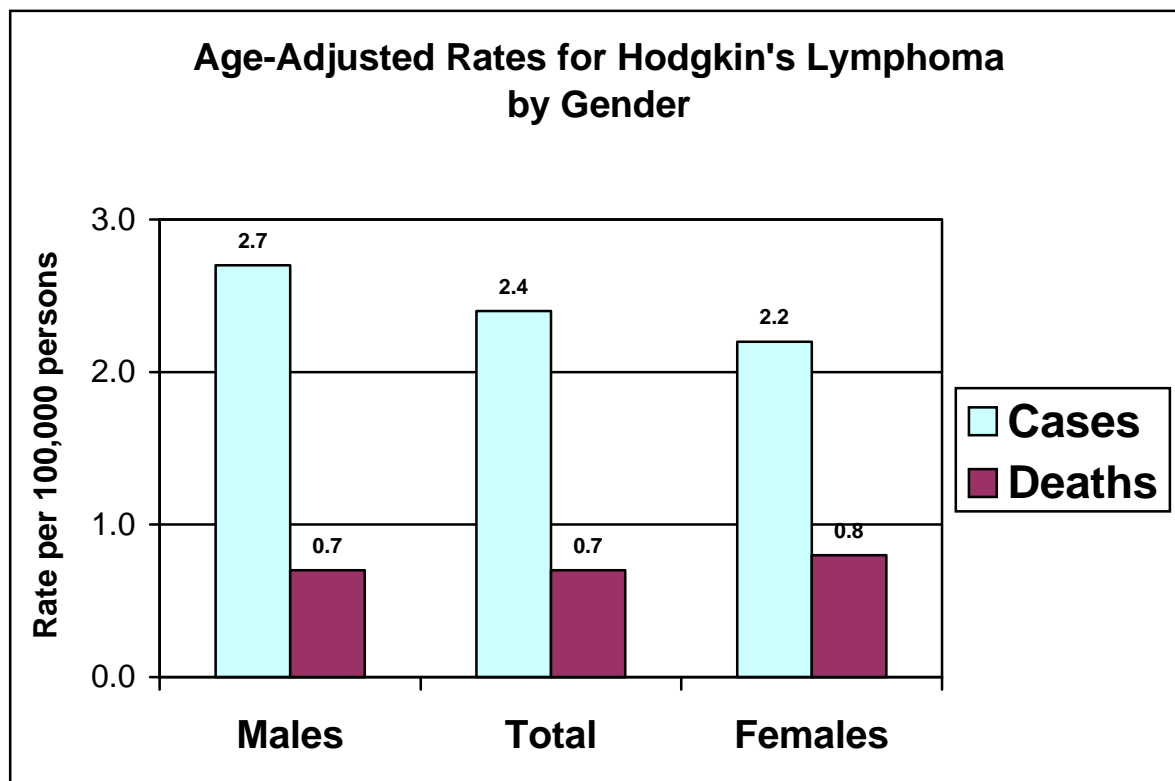
## General Risk Factors

<b>Occupation</b>	Wood-workers are thought to be at increased risk.
<b>Other</b>	A history of infection with Epstein Barr Virus (EBV) has been linked to increased risk as have conditions associated with decreased immunity such as in AIDS, organ transplants, and in those with congenital immune defects. With current treatment, Hodgkin's disease, which was once highly fatal, is among the most curable of all cancers.

**Fig. 25: 1998 Age-Specific Incidence and Mortality Rates by Race and Gender – Hodgkin’s Lymphoma**



**Fig. 26: 1998 Age-adjusted Cancer Incidence and Mortality Rates for Hodgkin's Lymphoma by Race and Sex**

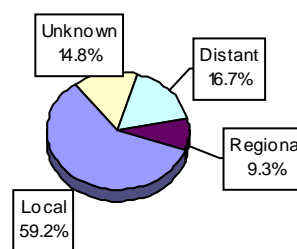


# Kidney and Renal Pelvis

## Incidence and Mortality Summary

Age-adjusted incidence rate per 100,000	Male	Female	Total
DCCR	10.2	7.3	8.7
SEER	13.3	6.8	9.7
Total # of new cases	28	26	54
# of deaths	9	7	16
Incidence rate: 8.7 (95% confidence interval: 6.3 – 11.2)			
Incidence rates by wards: Mean: 8.5 Median: 8.7 Range: 4.3 – 12.6/100,000			

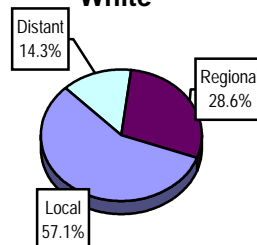
Stage at Diagnosis



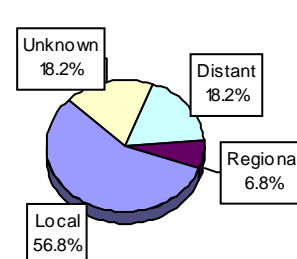
## Total Cases and Deaths by Ward

Ward	Cases	Deaths
Ward 1	7	1
Ward 2	5	0
Ward 3	4	2
Ward 4	7	3
Ward 5	8	2
Ward 6	6	2
Ward 7	7	3
Ward 8	8	3
Unknown	2	0

White



Black



## Description

**Incidence** The incidence of kidney cancer in DC is slightly lower than the SEER rate. Rates by ward differ up to 2.9 times from highest to lowest.

**Mortality** Death rates are lower in DC than in the US.

**Age** Incidence by age shows peak in children under age 15 that probably represents the occurrence of Wilm's Tumor. The second mode begins in late thirties and peaks in late 60s to 70s.

**Race & Gender** Males have 1.4 times higher incidence than females in DC, a ratio slightly lower than the US ratio of 2. Black populations in DC have 2.3 times higher incidence than white populations, whereas the US data suggest almost equal rates by race. Yet the incidence in black males and females in DC are very similar to the rates for the US. So the difference in the B/W ratio in DC is due to very low incidence of this cancer in whites.

**I/M ratio** The average incidence and mortality rates for the past 3 years (1996-1998) were used to calculate I/M ratios compared to the US. Ratios for all race/gender groups were similar to those of the US, about 2.5 except for white females, a group with slightly higher ratios both in DC and the US.

**Trends** Incidence trends in DC are difficult to determine because of small numbers in each of the three years. In the US, rates in blacks have been increasing, but the rates are stable in whites.

**Stage** In DC, 59 percent of cases are detected at localized stage and, despite small numbers, this percent is equal by race. This is a higher value than the 48 percent reported for the US. However, I/M ratios do not suggest a better survival for DC residents. The cases that fall into the other categories are few but they may be influencing the results.



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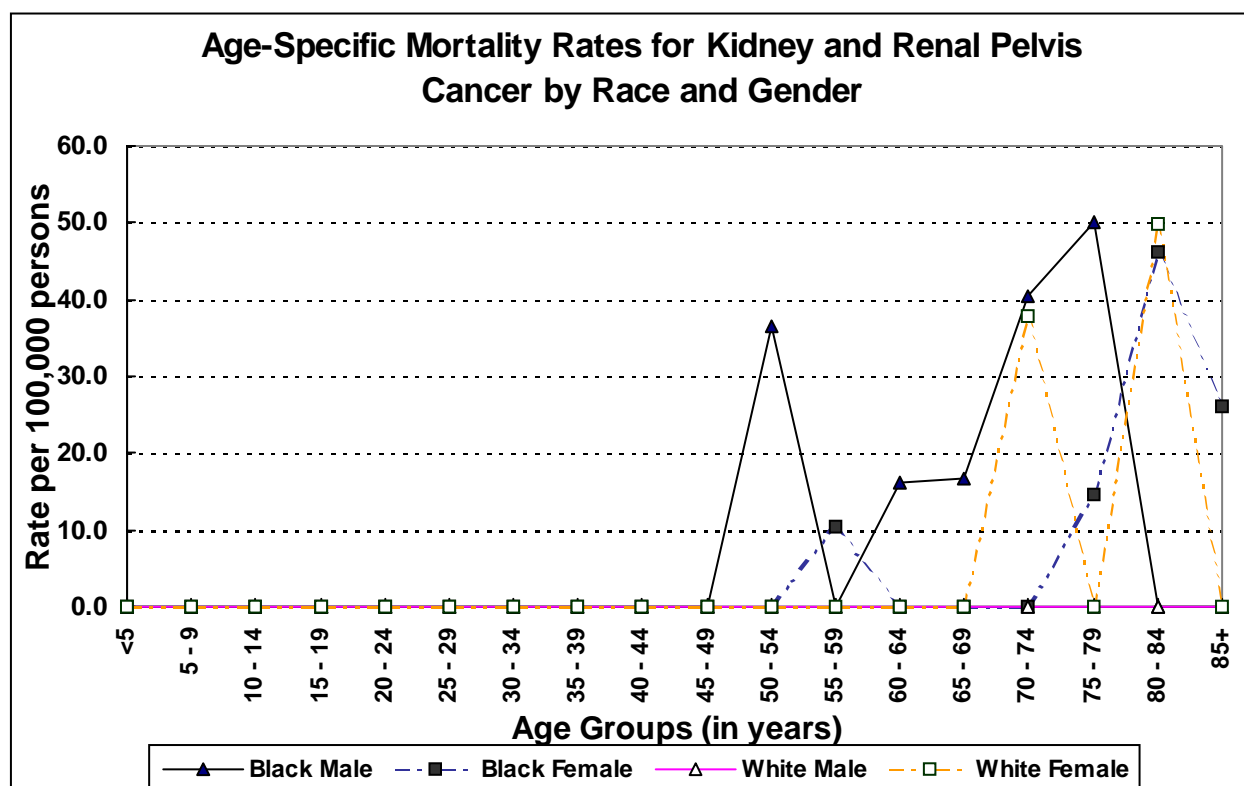
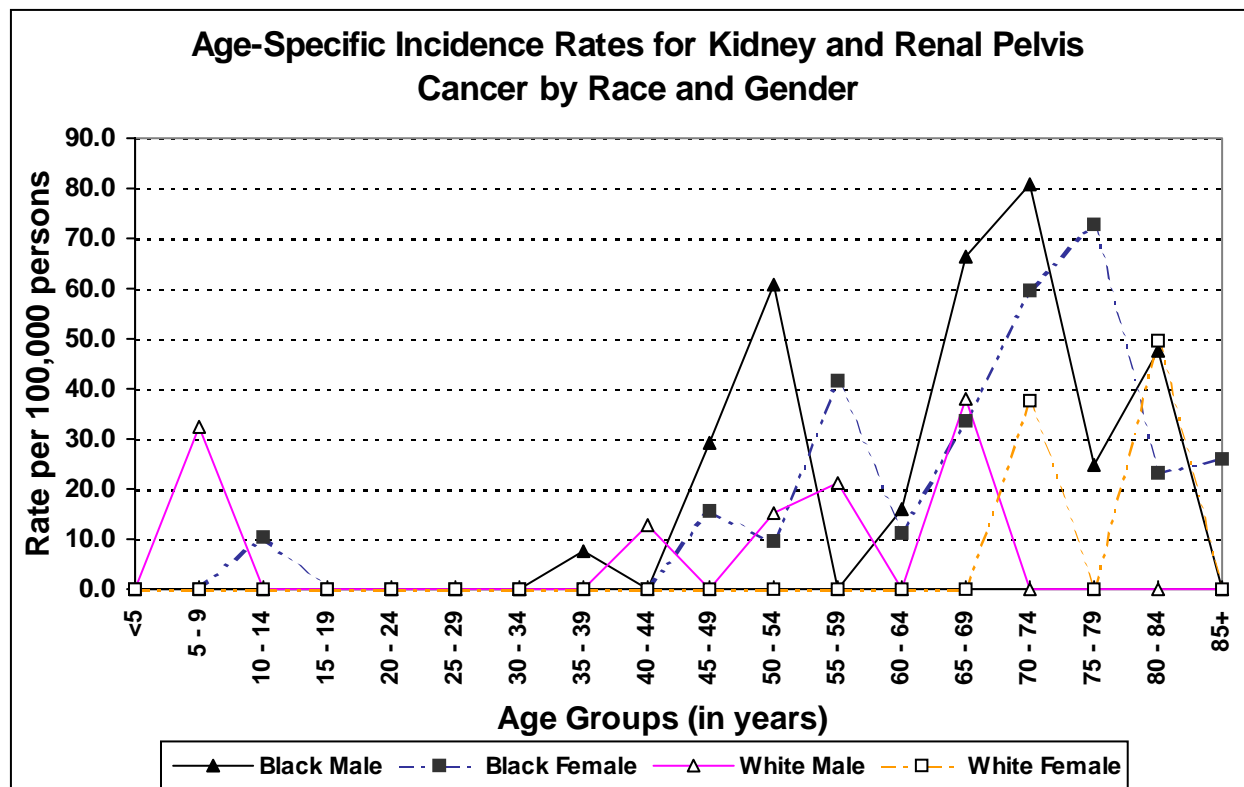
### **General Risk Factors**

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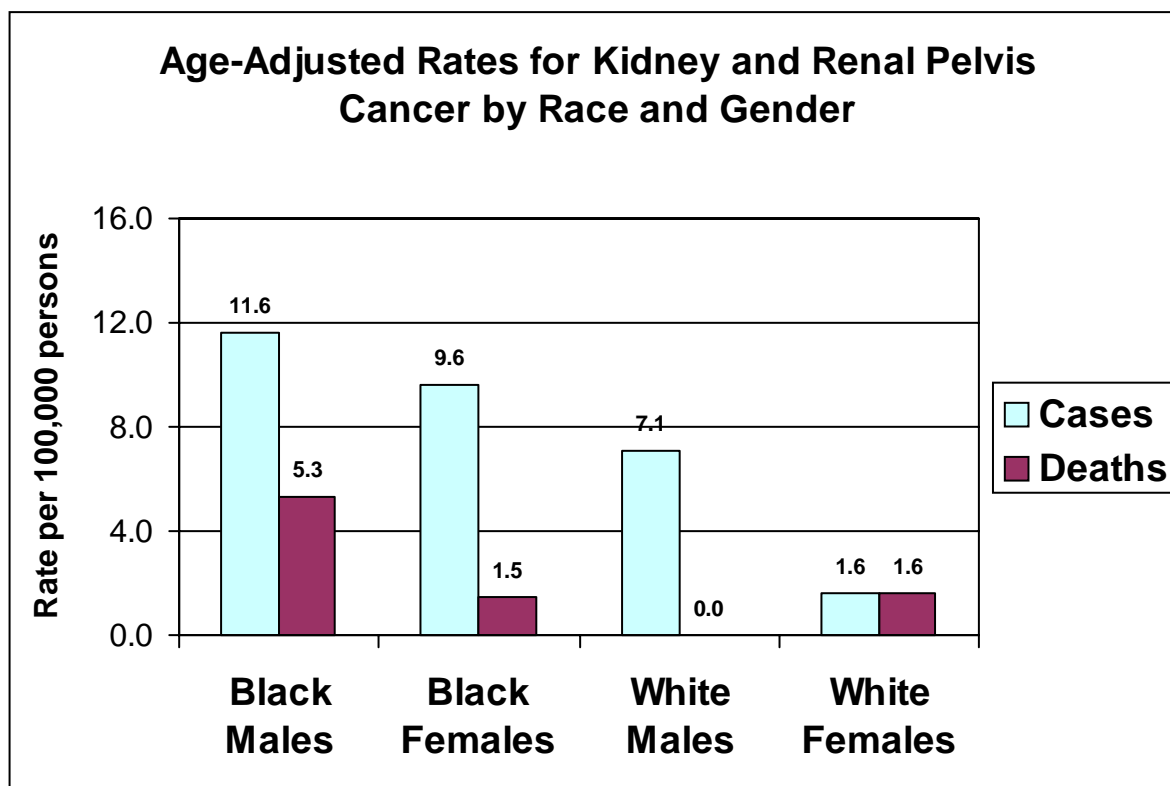
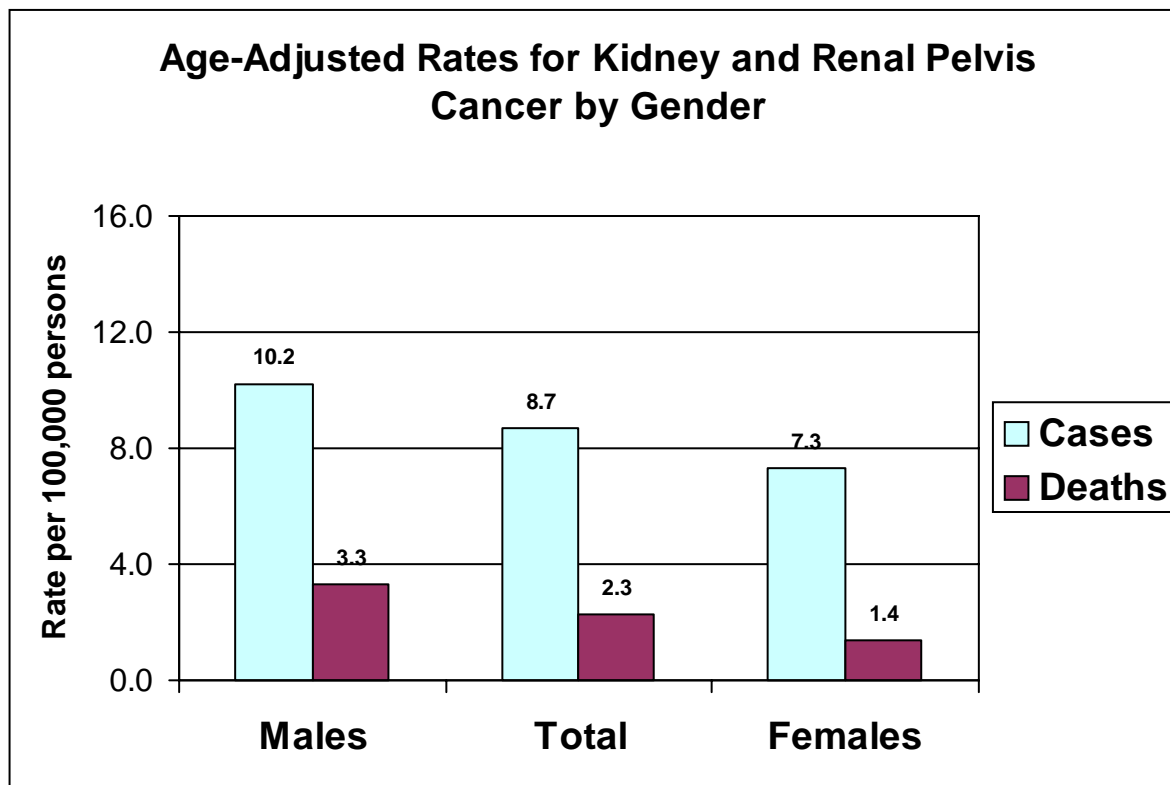
<b>Occupation</b>	Certain occupations, such as those with asbestos exposure and coke oven workers, are thought to have an increased risk.
<b>Smoking</b>	Cigarette smoking is strongly associated with adult kidney cancer. Smokers are at twice the risk of developing kidney cancer as non-smokers.
<b>Other</b>	Obesity in both males and females has also been associated with kidney cancer.

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**Fig. 28: 1998 Age-Specific Incidence and Mortality Rates by Race and Gender – Kidney and Renal Pelvis Cancer**



**Fig. 29: 1998 Age-adjusted Cancer Incidence and Mortality Rates for Kidney and Renal Pelvis Cancer by Race and Sex**

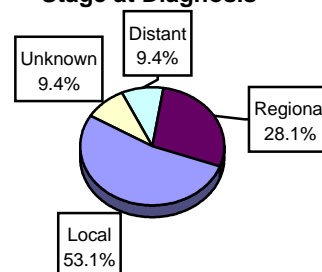


# Larynx

## Incidence and Mortality Summary

Age-adjusted incidence rate per 100,000	Male	Female	Total
DCCR	8.9	2.5	5.3
SEER	5.6	1.4	3.3
Total # of new cases	23	9	32
# of deaths	13	1	14
Incidence rate: 5.3 (95% confidence interval: 3.5 – 7.2)			
Incidence rates by wards: Mean: 6.2 Median: 7.2			
Range: 1.4 – 10.7/100,000			

Stage at Diagnosis



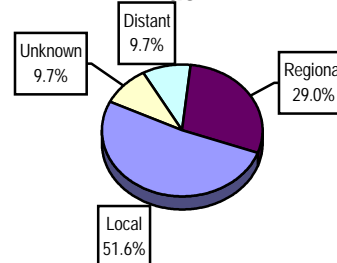
## Total Cases and Deaths by Ward

Ward	Cases	Deaths
Ward 1	6	2
Ward 2	7	1
Ward 3	0	1
Ward 4	3	2
Ward 5	8	3
Ward 6	1	0
Ward 7	5	2
Ward 8	2	3
Unknown	0	0

White



Black



## Description

<b>Incidence</b>	The incidence of laryngeal cancer in DC, 5.3/100,000, is significantly higher than the SEER rate of 3.3/100,000. Only one case of the 32 reported occurred in the white population in 1998 so the discussion actually reflects only black rates.
<b>Mortality</b>	The overall mortality rate is 2.3/100,000 based on 14 deaths. Twelve of these deaths are in black males. The average mortality rate in DC for three years is identical to US rate, except for black males. The black males have mortality rates 1.4 times that of the US.
<b>Age</b>	Cases first appear at ages of 40 plus years and increase with age to 70 years, after which rates decline.
<b>Race &amp; Gender</b>	Males are 3.6 times more likely to have this cancer than females, a ratio similar to that reported for the US. The black to white ratio using the average incidence over the three year period (1996-1998) is 3.1 for males and 5.2 for females, compared to 1.5 for US. However, if the average incidence for each race-gender group is compared to SEER, only black males in DC have a rate that is 1.6 times higher than the US. All other race-gender groups have a lower incidence in DC compared to the US. Thus, the entire excess incidence of laryngeal cancer in DC is based on the high rate in black males.
<b>I/M ratio</b>	Because three-year average incidence rates for all race-gender groups except black males are lower than US values while death rates are equal, the I/M ratios for these groups are all slightly lower than ratios for US. For black males, however, the ratio is almost the same as the US, since both incidence and mortality excesses are proportionately similar. Thus, black males appear to have a higher incidence without any difference in survival compared to US.
<b>Trends</b>	The rates vary by year due to small numbers, making it difficult to evaluate trends.

**Stage** In 1998, 53 percent of cases were identified at a local stage in DC residents as compared to 51% in SEER data. However, since most cases occurred in blacks, the appropriate comparison is between the percent localized cases in DC black population, 52 percent, and the US black population, 42 percent. These data suggest that although incidence in black males is high in DC, the cases are detected at earlier stages than in the general US black population. This should result in better survival, although with the small number of deaths, no differences have been identified. (See I/M ratio.)

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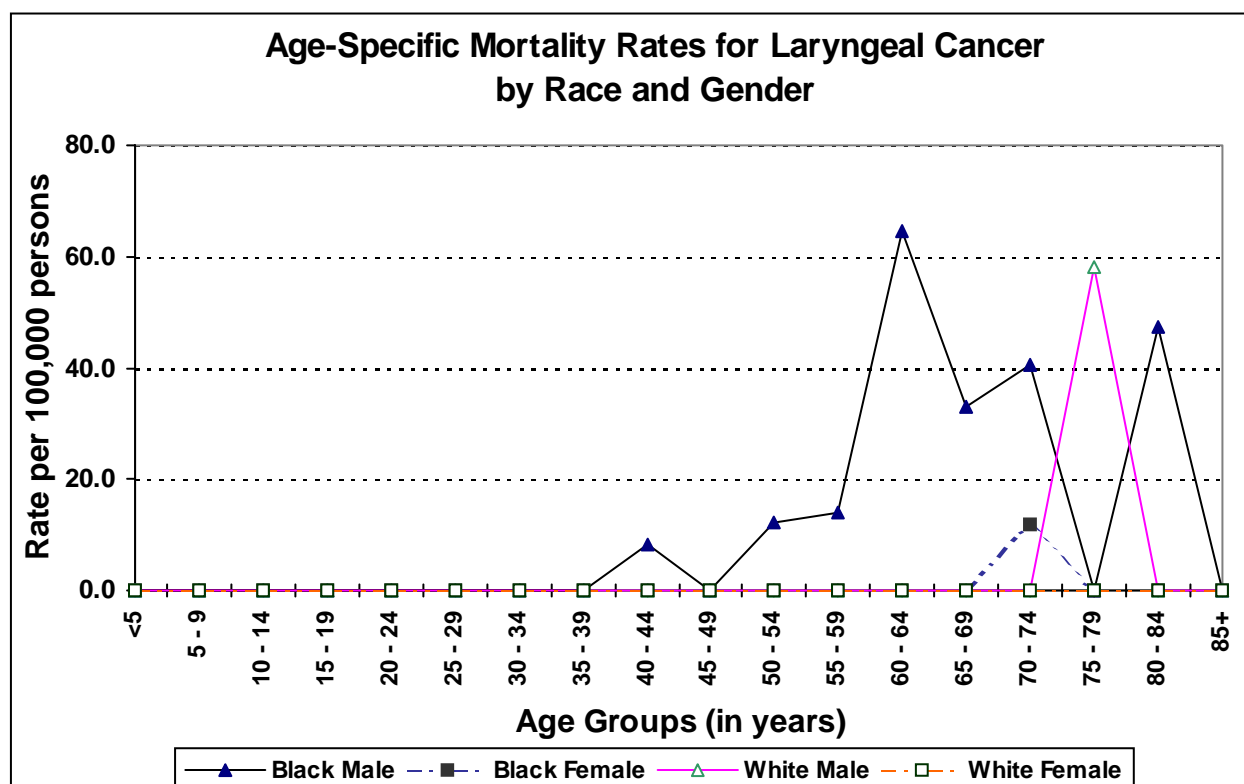
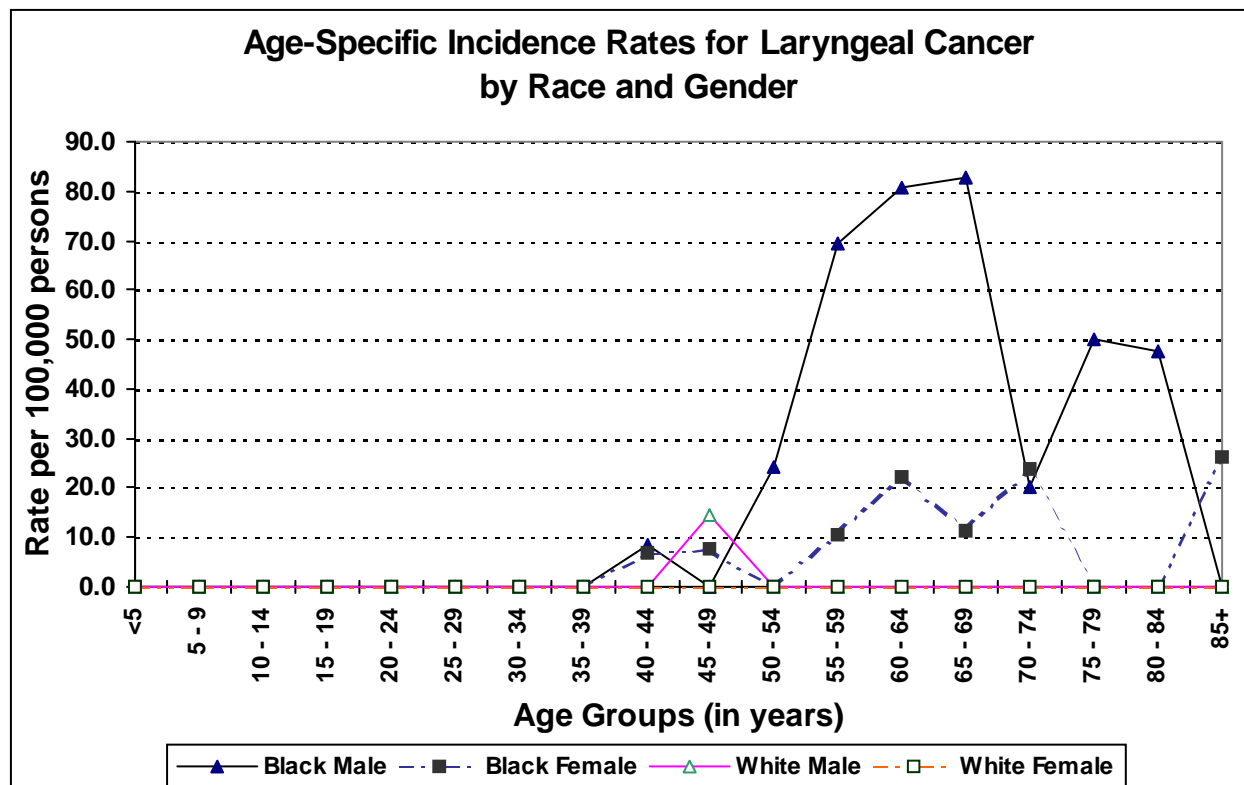
### General Risk Factors

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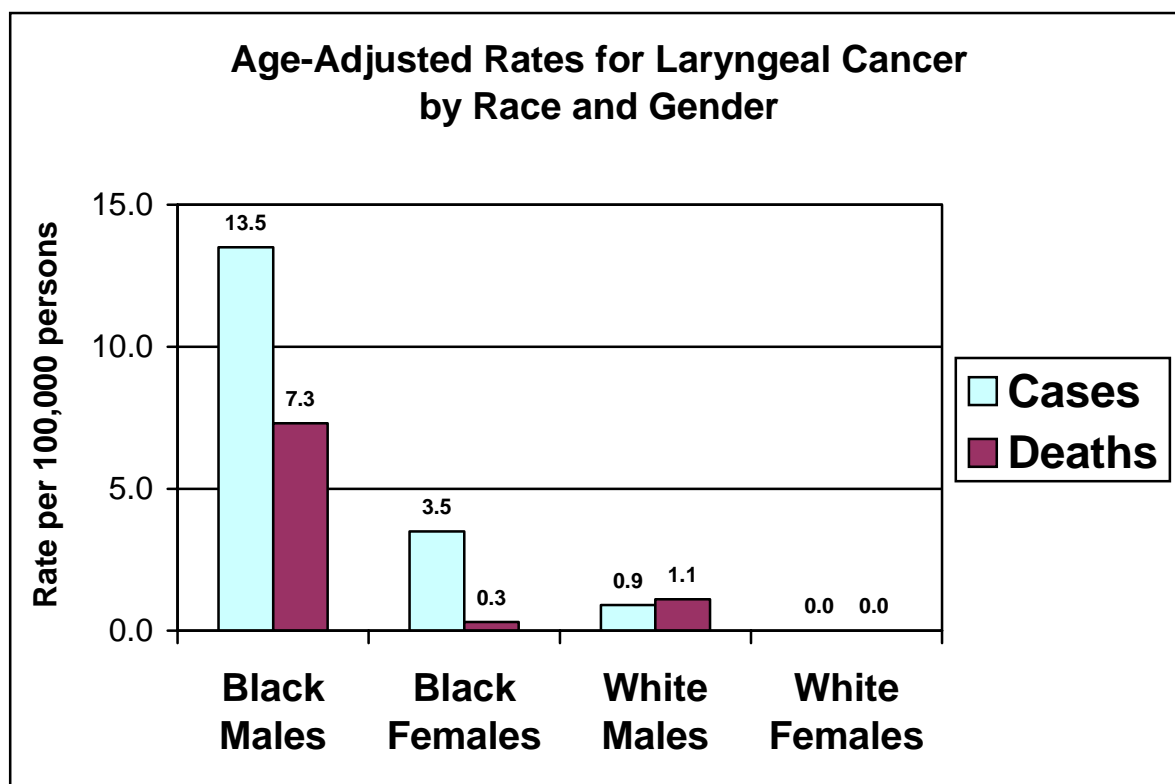
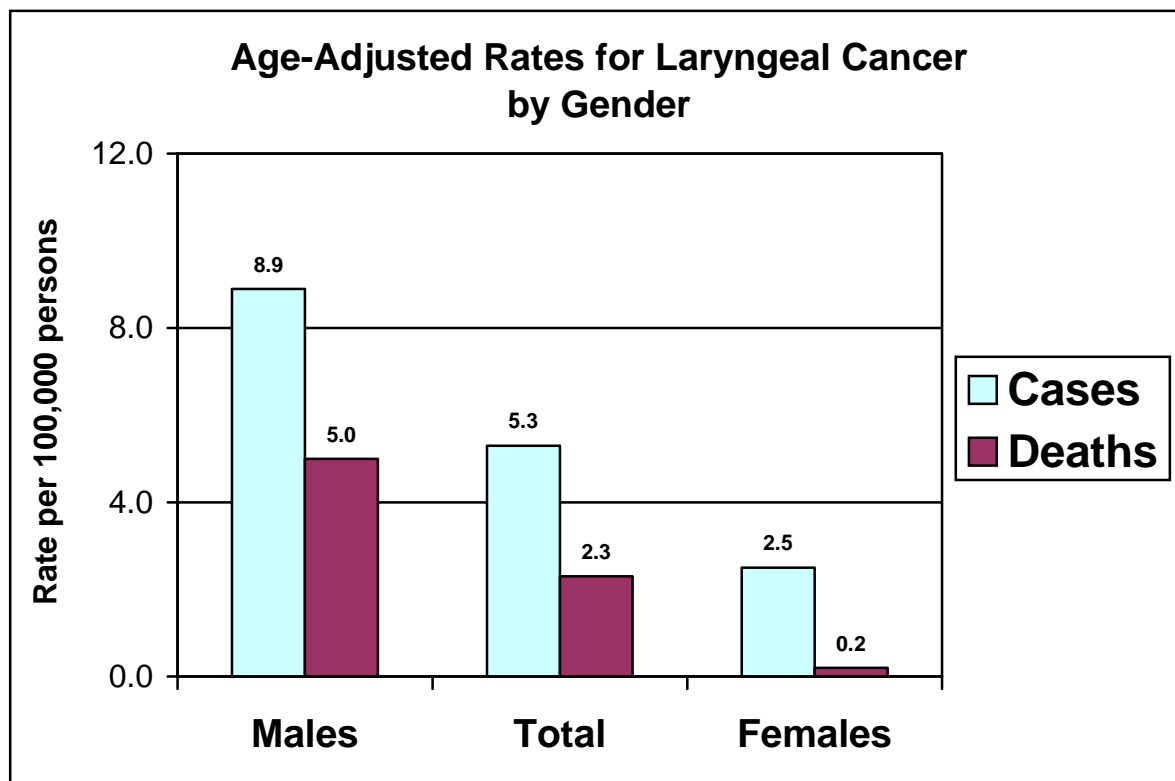
<b>Occupation</b>	Laryngeal cancer has been associated with exposures such as asbestos and wood dust.
<b>Smoking</b>	Cigarette smoking and alcohol use are both major risk factors. The combination of alcohol consumption and tobacco use (smoking or chewing tobacco) acts to greatly increase the risk. A patient with a single laryngeal cancer who continues to smoke and drink alcohol has an greater risk of developing a second laryngeal tumor or a cancer of the aeroesophageal tract.

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**Fig. 31: 1998 Age-Specific Incidence and Mortality Rates by Race and Gender – Laryngeal Cancer**



**Fig. 32: 1998 Age-adjusted Cancer Incidence and Mortality Rates for Laryngeal Cancer by Race and Sex**



# Leukemia

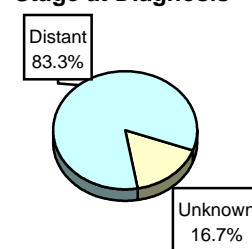
## Incidence and Mortality Summary

Age-adjusted incidence rate per 100,000	Male	Female	Total
DCCR	6.5	5.8	6.1
SEER	12.1	7.7	9.6
Total # of new cases	17	19	36
# of deaths	13	16	29
Incidence rate: 6.1 (95% confidence interval: 4.0 – 8.2)			
Incidence rates by wards: Mean: 5.8 Median: 5.5 Range: 1.0 – 10.8/100,000			

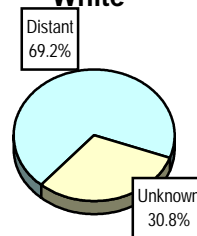
## Total Cases and Deaths by Ward

Ward	Cases	Deaths
Ward 1	2	3
Ward 2	7	3
Ward 3	8	5
Ward 4	8	7
Ward 5	3	4
Ward 6	1	4
Ward 7	5	3
Ward 8	1	0
Unknown	1	0

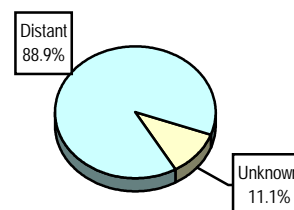
## Stage at Diagnosis



## White



## Black



## Description

**Incidence** The incidence rate for all types of leukemia in DC, 6.1 /100,000, is significantly lower than the SEER rate. Ward incidence rates vary widely because of small numbers.

**Mortality** The death rate for leukemia in DC is 4.2/100,000, a rate significantly lower than the US rate.

**Age** Leukemia rates by age show the expected peak in children, especially in age group 0-4 years, and then a low incidence until age 40 plus years when the rates begin to rise. This age distribution is similar to the US. However, although the childhood leukemia rate is the same as that of the US, the racial distribution indicates that all childhood cases occur in black children despite the fact that a predominance in the white population would be expected. Since the case number is small, data from other years must be combined to fully evaluate this finding. Mortality shows a similar black predominance in deaths for ages 0-4 years.

**Race & Gender** Males have a slightly higher incidence of leukemia than females, but this excess is less than the male predominance reported by SEER, 1.6. The white population has 1.5 times higher rate than the black population.

Using 3-year average incidence rates, 1996-1998, the rates for each race-gender group are lower than reported by SEER. The rates for black males and white females especially are only half of that for the US. Although mortality is also lower than the US, the percent reduction in rates is not as low as found for incidence rates except for white females. Therefore, there may be some under-ascertainment of leukemia cases in DC residents.

**I/M ratio** The 3-year average incidence to mortality ratios are the same for all race-gender



groups except for black males. For others, the I/M ratios are 1.2-1.6, values close to those reported for the US. Black males have an incidence rate that is lower than the mortality rate. The reason for this inversion is not known.

**Trends** The numbers of cases by subgroup are too small to evaluate for trends.  
**Stage** All leukemias are considered to be distant in stage.

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### General Risk Factors

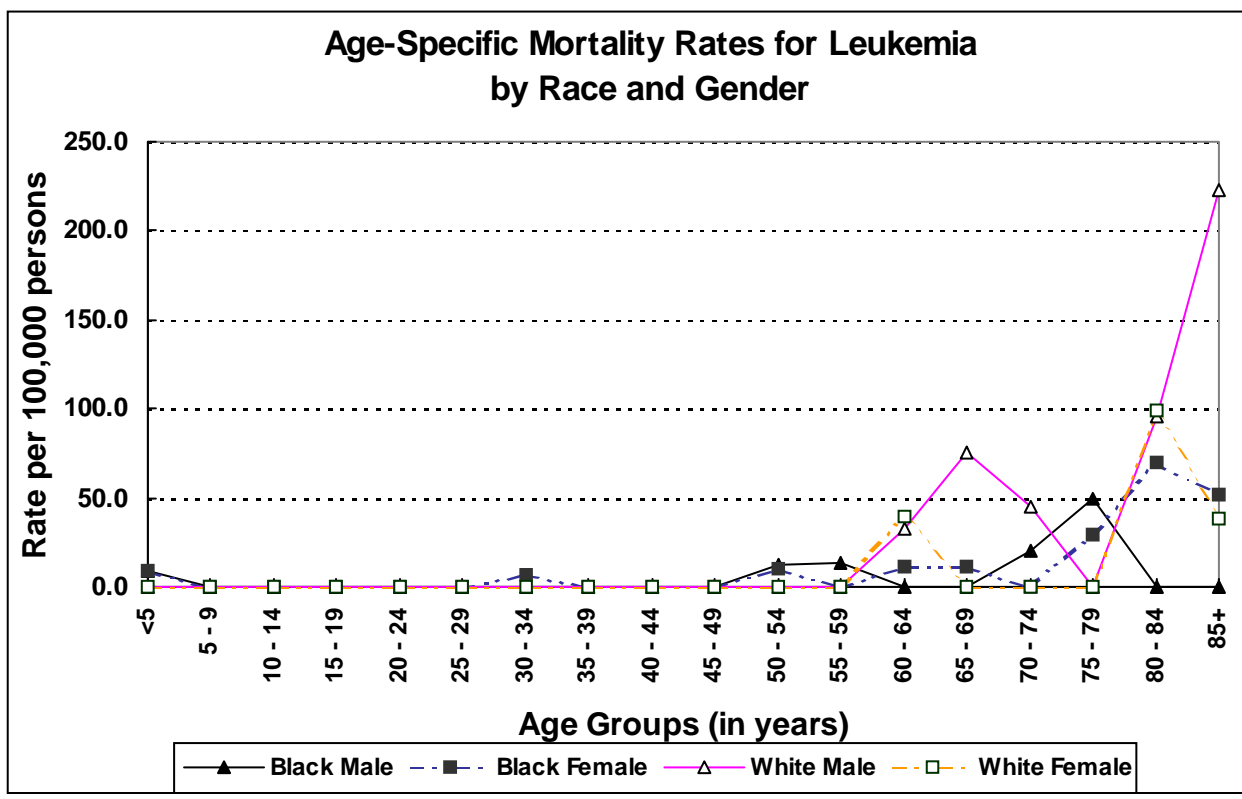
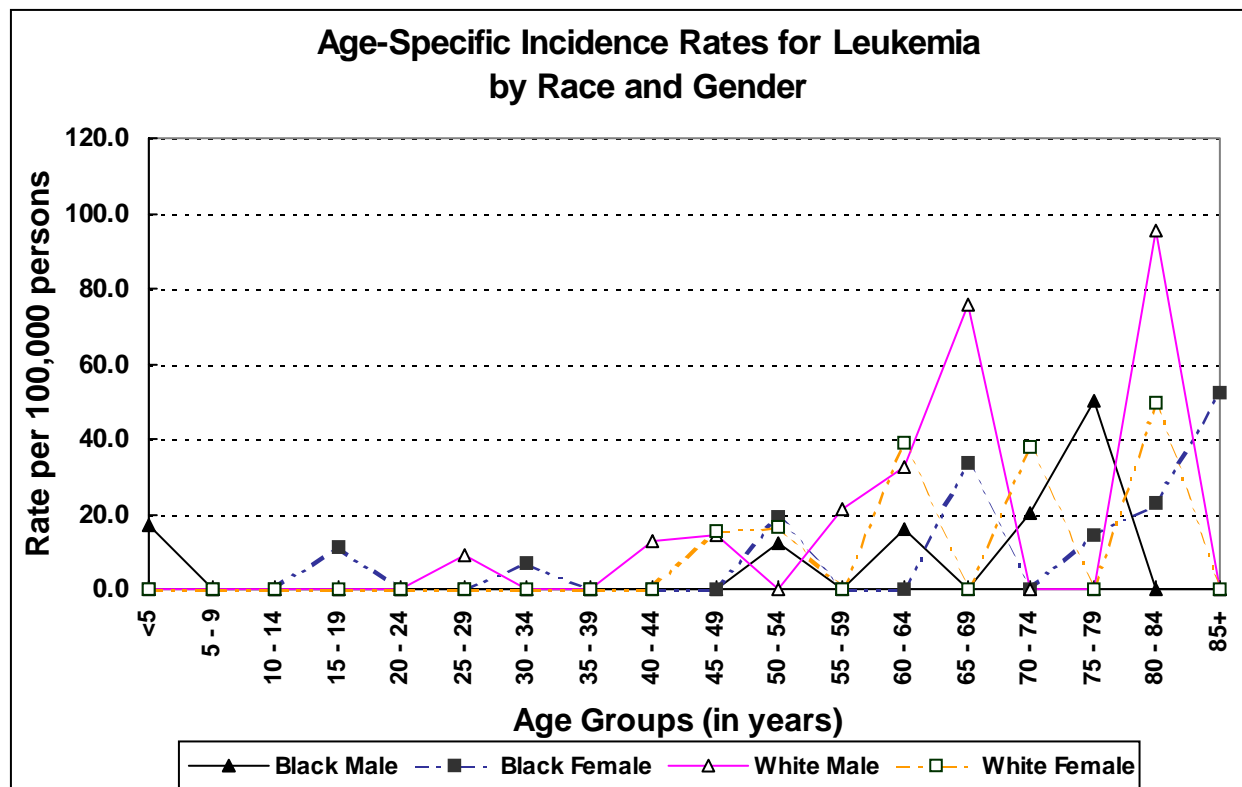
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**Occupation** Exposure to benzene is known to increase the risk for acute myelogenous leukemia (AML).

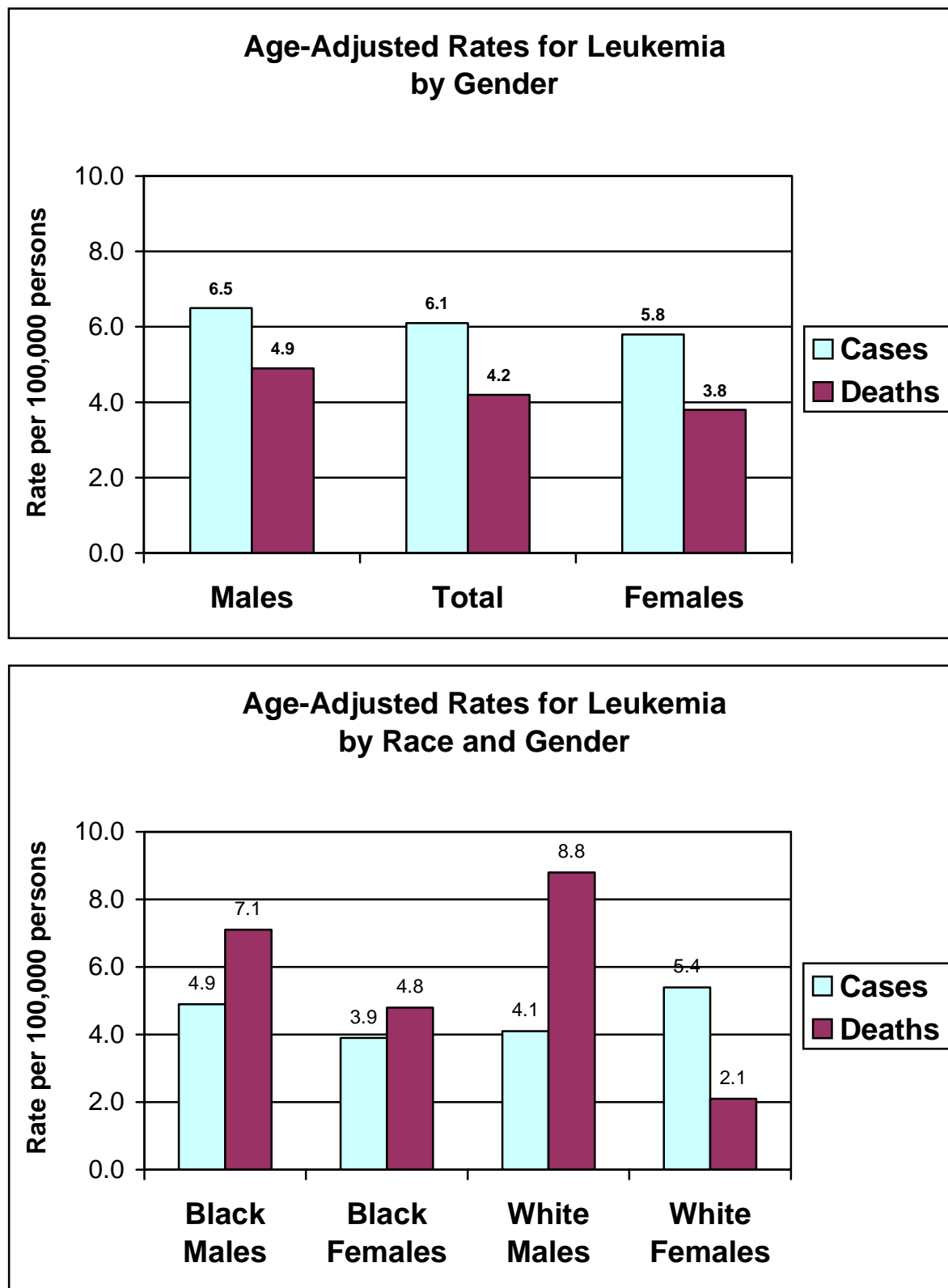
**Other** Ionizing radiation exposure increases the risk. Leukemia is a cancer that differs in demographics and risk factors depending on the specific leukemia type. Acute lymphoblastic leukemia (ALL) is the main form of leukemia in children. Chronic lymphocytic leukemia (CLL) is closely associate with non-Hodgkins lymphoma.

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**Fig. 34: 1998 Age-Specific Incidence and Mortality Rates by Race and Gender - Leukemia**



**Fig. 35: 1998 Age-adjusted Cancer Incidence and Mortality Rates for Leukemia by Race and Sex**

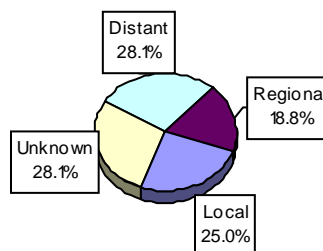


# Liver & Intrahepatic Bile Duct

## Incidence and Mortality Summary

Age-adjusted incidence rate per 100,000	Male	Female	Total
DCCR	8.0	2.3	4.8
SEER	6.6	2.4	4.4
Total # of new cases	22	10	32
# of deaths	18	5	23
Incidence rate: 4.8 (95% confidence interval: 3.1 – 6.5)			
Incidence rates by wards: Mean: 5.4 Median: 4.9			
Range: 2.2 – 9.0 /100,000			

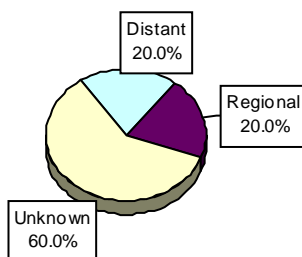
Stage at Diagnosis



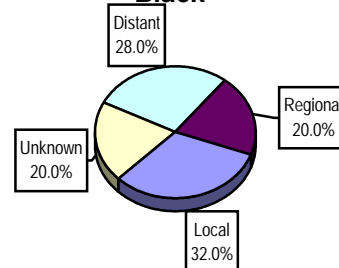
## Total Cases and Deaths by Ward

Ward	Cases	Deaths
Ward 1	0	0
Ward 2	8	6
Ward 3	2	1
Ward 4	8	4
Ward 5	5	3
Ward 6	3	4
Ward 7	4	2
Ward 8	2	2
Unknown	0	1

White



Black



## Description

**Incidence** Liver cancer incidence, 4.8/100,000, is only slightly higher in DC than in the US. Rates by wards vary but numbers are small.

**Mortality** The liver cancer death rate in DC, 3.5/100,000, is almost identical to the US rate.

**Age** Except for a few isolated cases, liver cancer first appears about age 45 and increases rapidly thereafter into advanced age groups.

**Race & Gender** Males have a 3.5-fold higher incidence than females. The risk in the black population is almost twice as high as in the white population. These findings are similar to reports from SEER data. Using a three-year average rate to examine race-gender differences, both black men and women have over twice the incidence of liver cancer than the corresponding white groups.

The incidence rates by sub-group show that black males and females have rates about 10 percent higher than SEER, whereas white males and females have rates about 20 percent below SEER.

Mortality rates in DC are all lower than those reported by SEER except in black males, where rates are slightly higher.

**I/M ratio** The I/M ratios are slightly higher in all race-gender groups in DC than in US data, suggesting that survival may be slightly better in DC. White female ratios are similar to the US ratio.

**Trends** The number of cases are too small in each year to be sure of a trend. US data have suggested that this cancer is increasing by five percent per year over the past five years.

**Stage** The stage of liver cancer at diagnosis is very similar for both DC and US cases

with about 20 to 28 percent of cases diagnosed in each of the three stages. Both the DC and the US data have a high percent of unknowns (28 and 34 percent, respectively). Reported five-year survival rates are poor in US data, 1 to 15 percent, regardless of stage.

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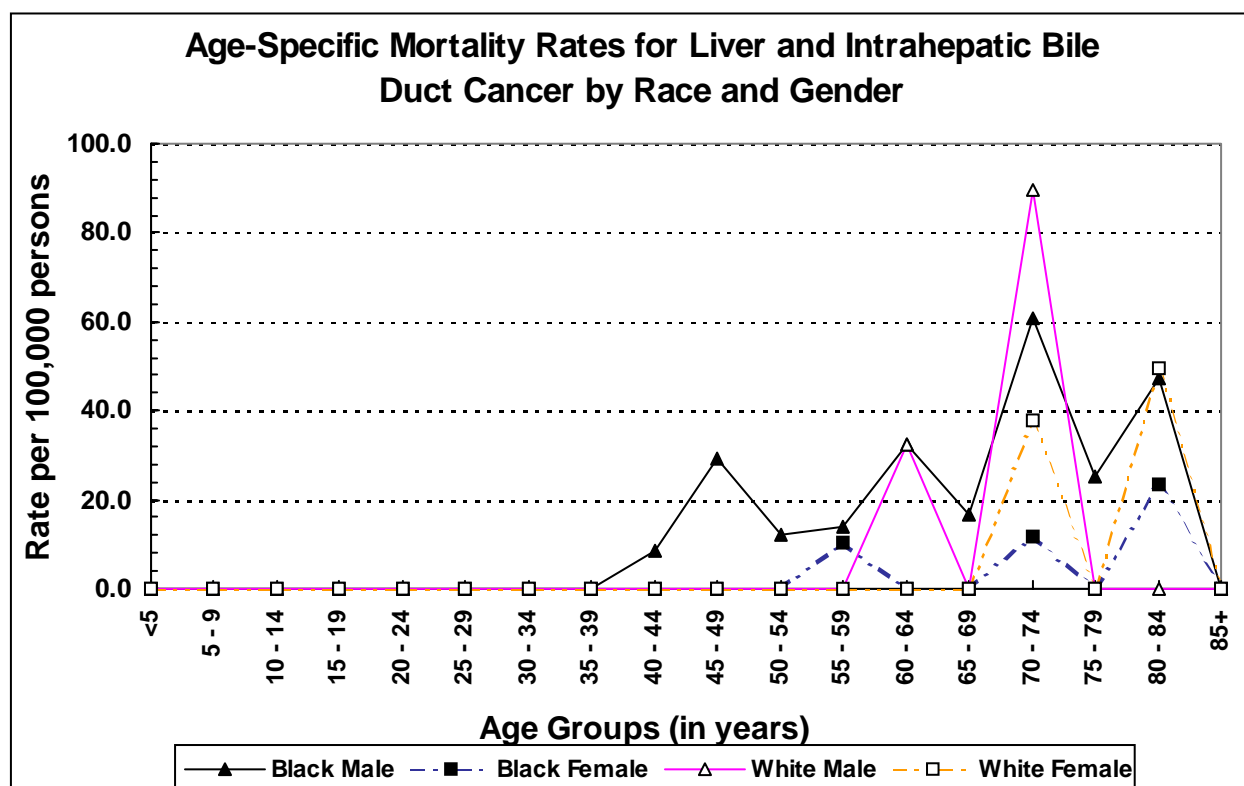
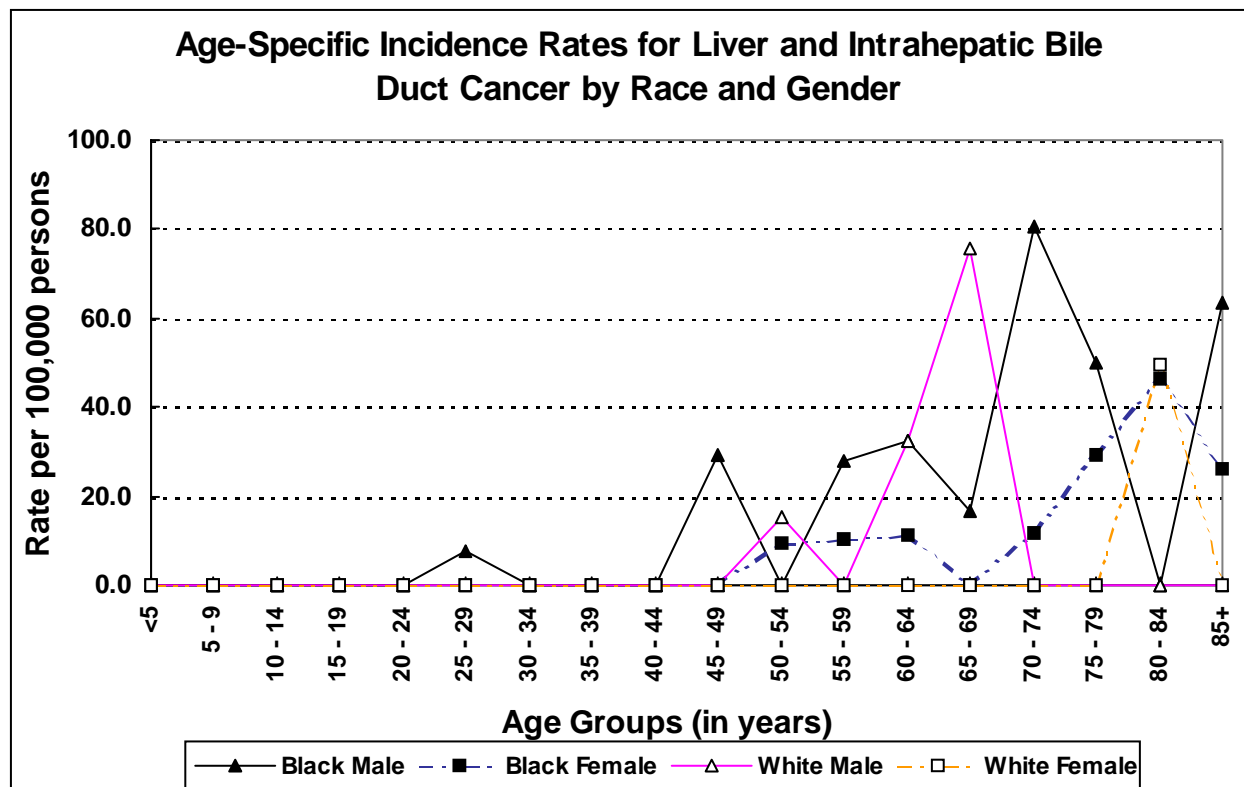
### **General Risk Factors**

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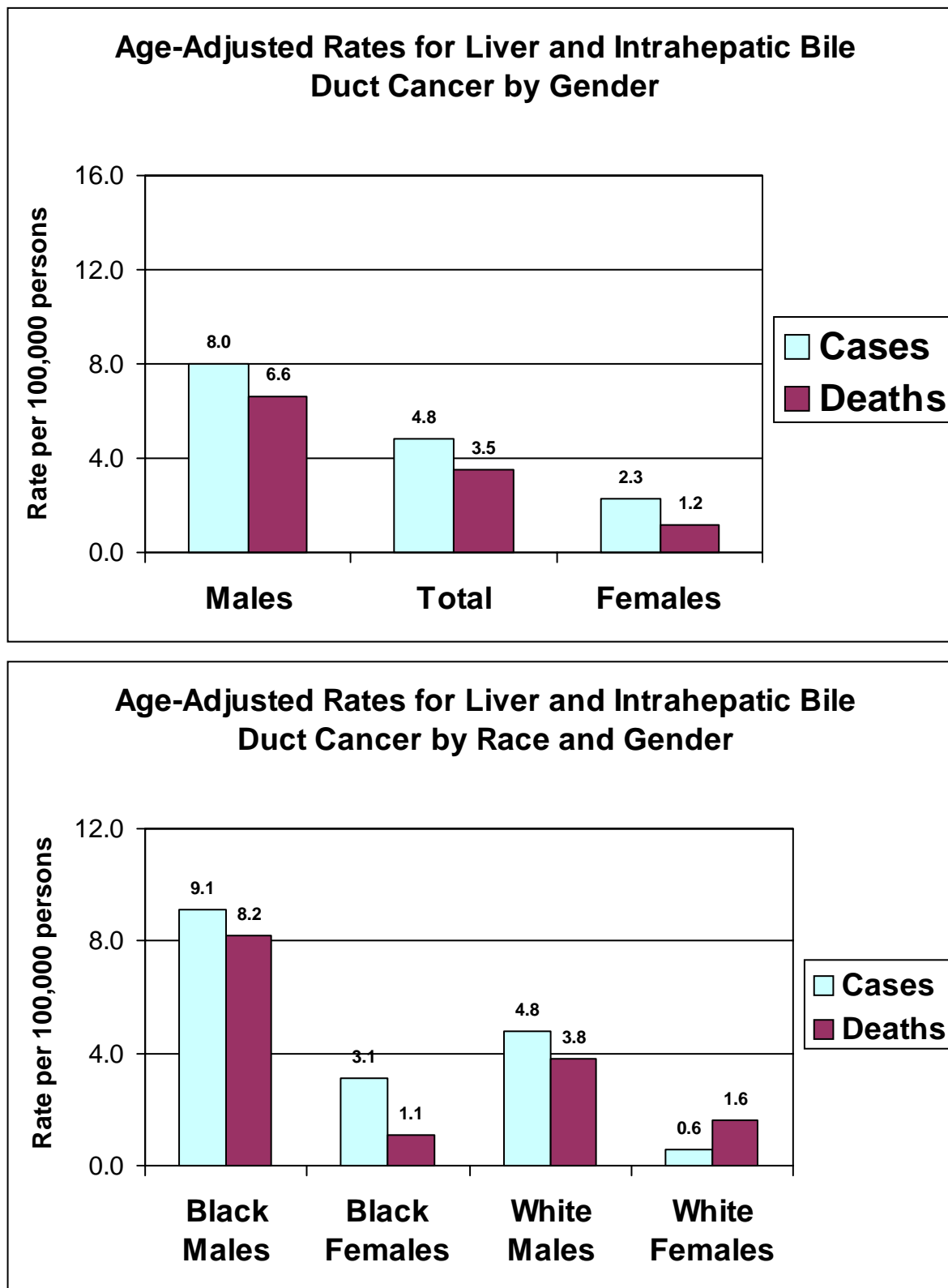
<b>Smoking</b>	Cigarette smoking may increase the risk of liver cancer. Hepatitis B and Hepatitis C infections are significant causes of hepatocellular carcinoma.
<b>Other</b>	Cirrhosis of the liver due to viral hepatitis, alcoholism, or other conditions is also a known causative factor in hepatocellular carcinoma.

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**Fig. 37: 1998 Age-Specific Incidence and Mortality Rates by Race and Gender – Liver and Intrahepatic Bile Duct Cancer**



**Fig. 38: 1998 Age-adjusted Cancer Incidence and Mortality Rates for Liver and Intrahepatic Bile Duct Cancer by Race and Sex**

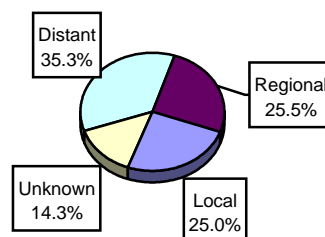


# Lung

## Incidence and Mortality Summary

Age-adjusted incidence rate per 100,000	Male	Female	Total
DCCR	91.5	48.1	66.0
SEER	69.8	43.4	54.8
Total # of new cases	246	182	428
# of deaths	154	133	287
Incidence rate: 66.0 (95% confidence interval: 59.6 – 72.4)			
Incidence rates by wards: Mean: 65.9 Median: 59.0 Range: 40.4 – 102.6 /100,000			

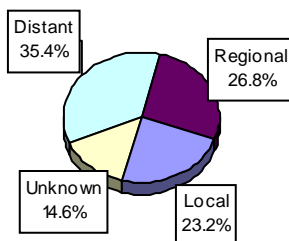
Stage at Diagnosis



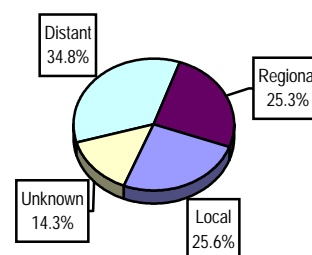
## Total Cases and Deaths by Ward

Ward	Cases	Deaths
Ward 1	39	27
Ward 2	38	31
Ward 3	39	30
Ward 4	85	56
Ward 5	64	47
Ward 6	70	32
Ward 7	48	39
Ward 8	39	25
Unknown	6	0

White



Black



## Description

**Incidence** The incidence of lung cancer in DC, 66/100,000, is significantly higher than the SEER rate. The difference is primarily due to a significantly high incidence rate in DC men compared to SEER, with rate for women being almost equal to US rates. A 2.5-fold difference in rates occur between wards having the highest and lowest rates.

**Mortality** The lung cancer death rate in DC is 42.6/100,000, which is similar to the US rate.

**Age** Except for sporadic cases of lung cancer, most cases occur after age 40 and the rates increase to ages 70-79 years. The risk in blacks begins at ages 25-39 years and in whites not until ages 45-54 years.

**Race & Gender** Males in DC have twice the risk of lung cancer compared to females. The black population has a two-fold higher risk of this cancer compared to the white population, which is a higher ratio than that reported for the US.

The unusual feature to the specific race-gender incidence rates is that while total rates do not differ significantly from US rates for either race, male rates do. However, they differ in opposite directions with the white male rate being significantly lower than US rates and the black male rate being significantly higher. Thus, the significantly high incidence of lung cancer for all of DC is due to the excess risk of lung cancer in black males.

**I/M ratio** The I/M ratios in DC are higher than found in US rates, suggesting that either the incidence is increasing recently, the ascertainment of cases is improved in DC, or cases in DC are surviving better after diagnosis.



- Trends** US data indicate that mortality and incidence are decreasing in males of both races, but females show only a slight decline in incidence and a stable or slightly increasing mortality. DC trends are similar with one exception; the black male population has shown a decline in mortality but an increase in incidence over the past three years.
- Stage** The black and white population lung cancers are diagnosed at the same stage. There are more cases diagnosed at local stages and fewer at distant stages compared to SEER.

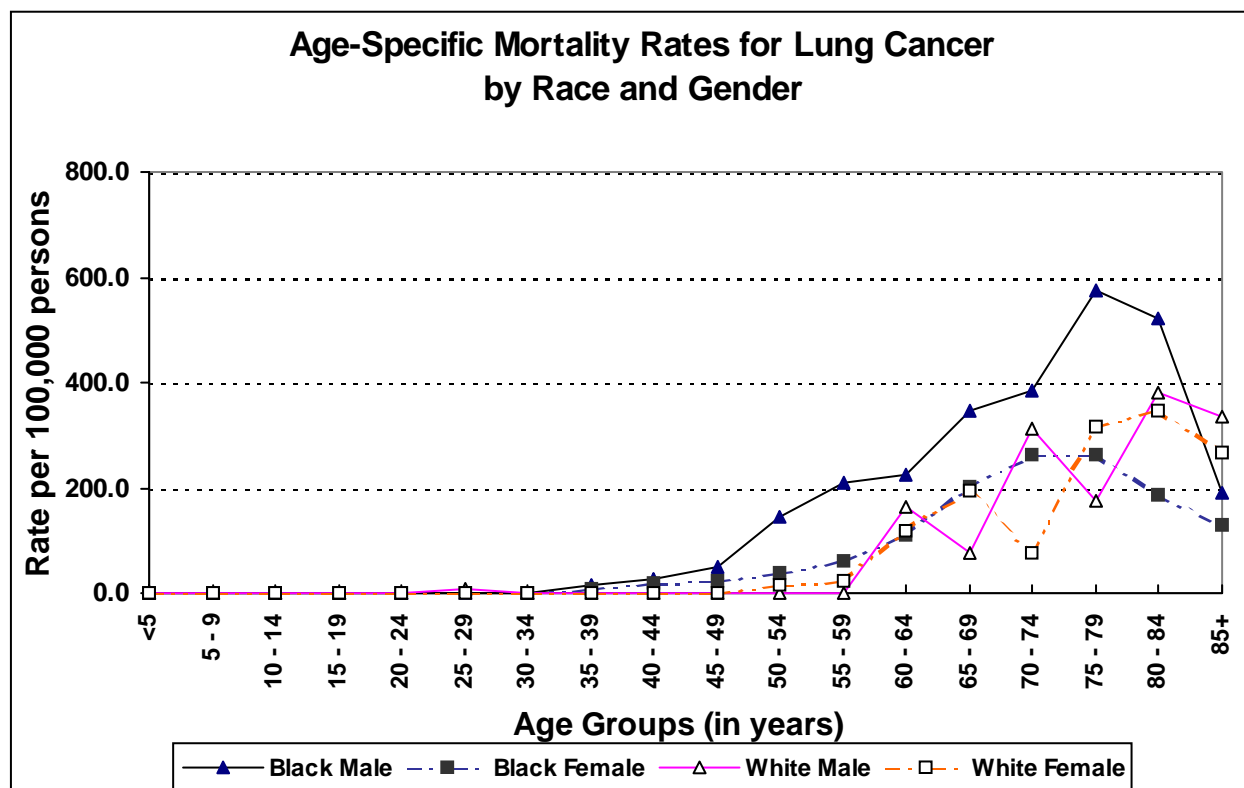
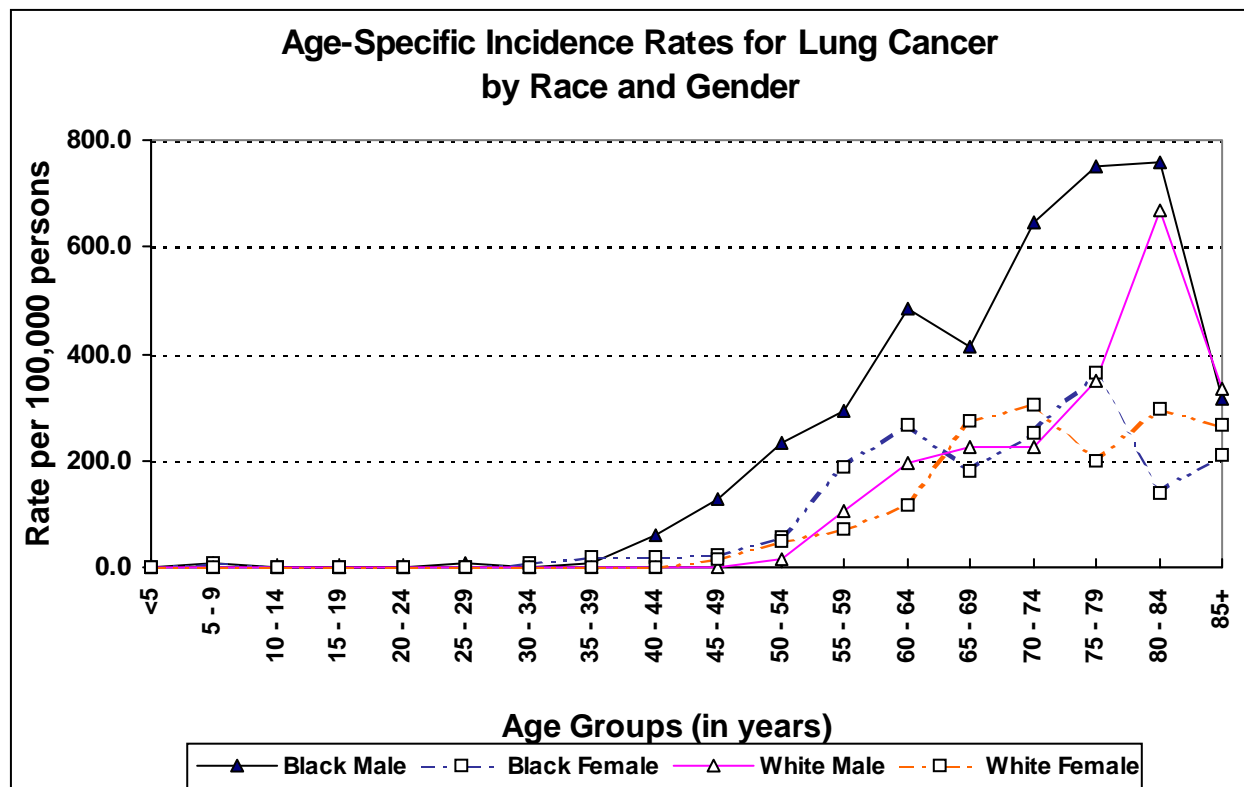
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### **Risk and Associated Factors**

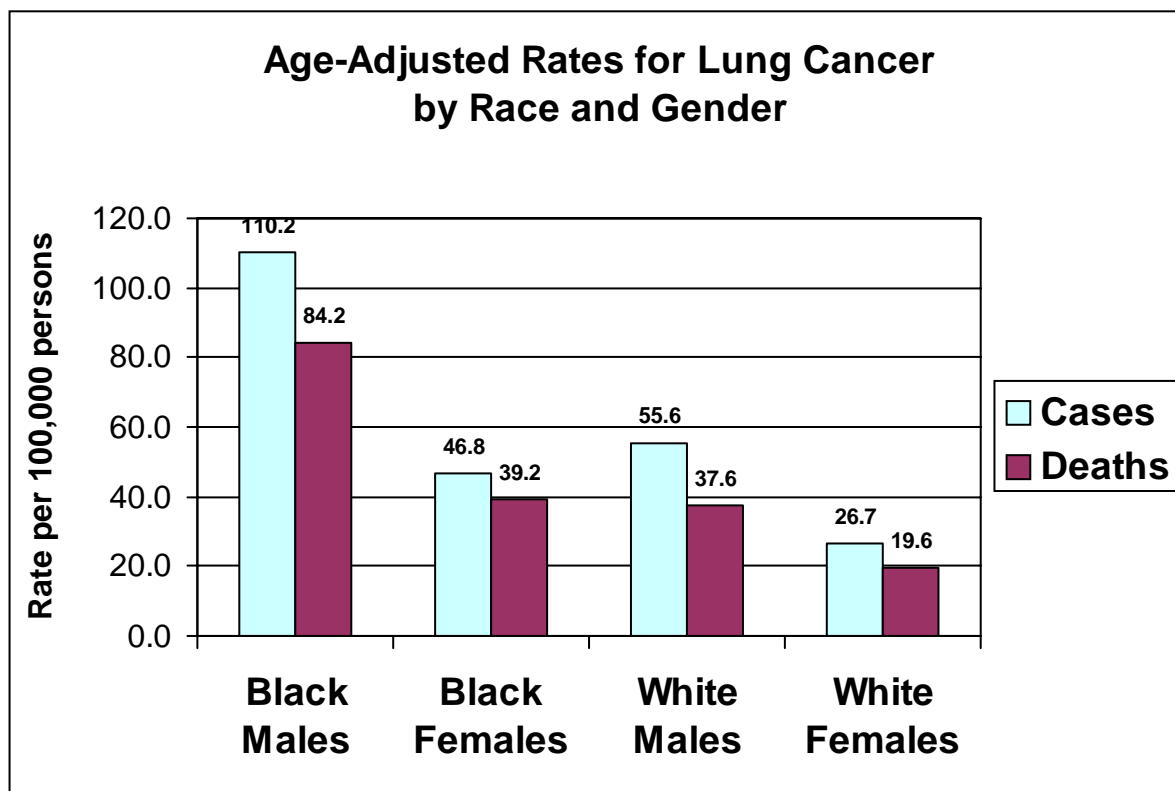
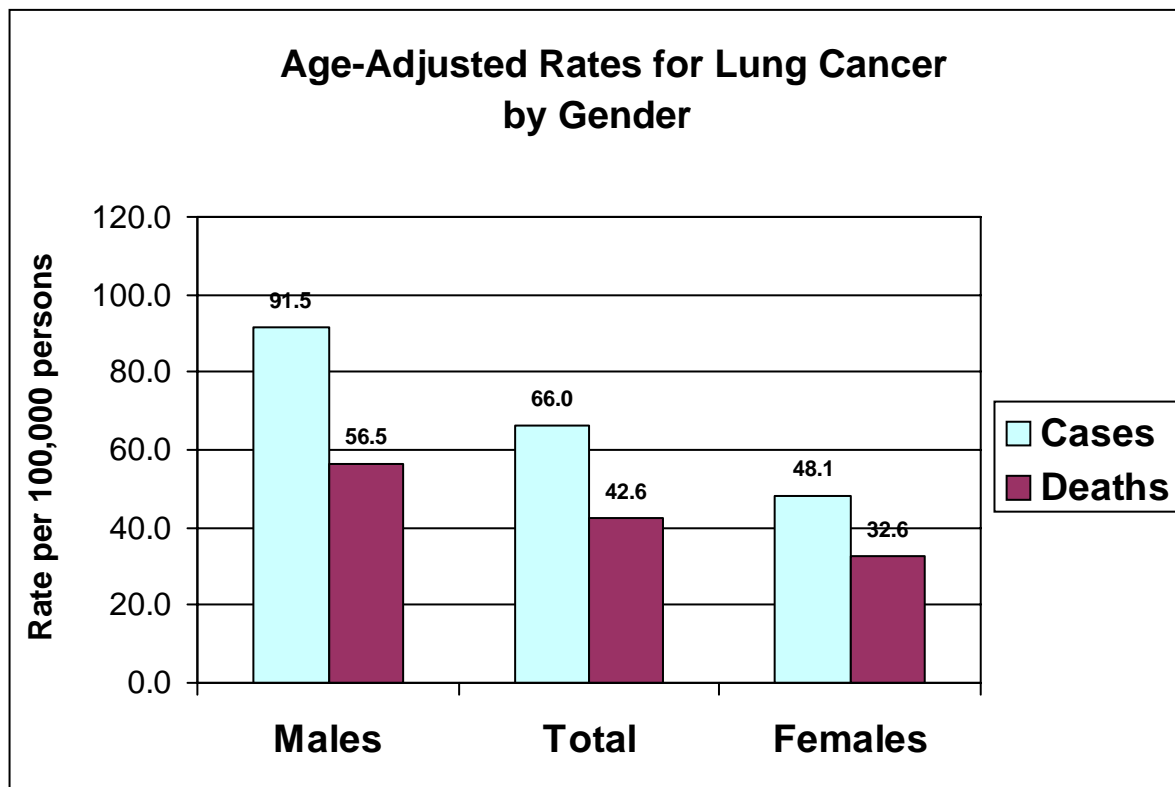
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- Smoking** Cigarette smoking, including exposure to second-hand smoke, is the most important risk factor accounting for over 85% of lung cancer deaths.
- Occupation** Occupational or environmental exposure to asbestos, radon, polycyclic aromatic hydrocarbons and other substances increase the risk.
-

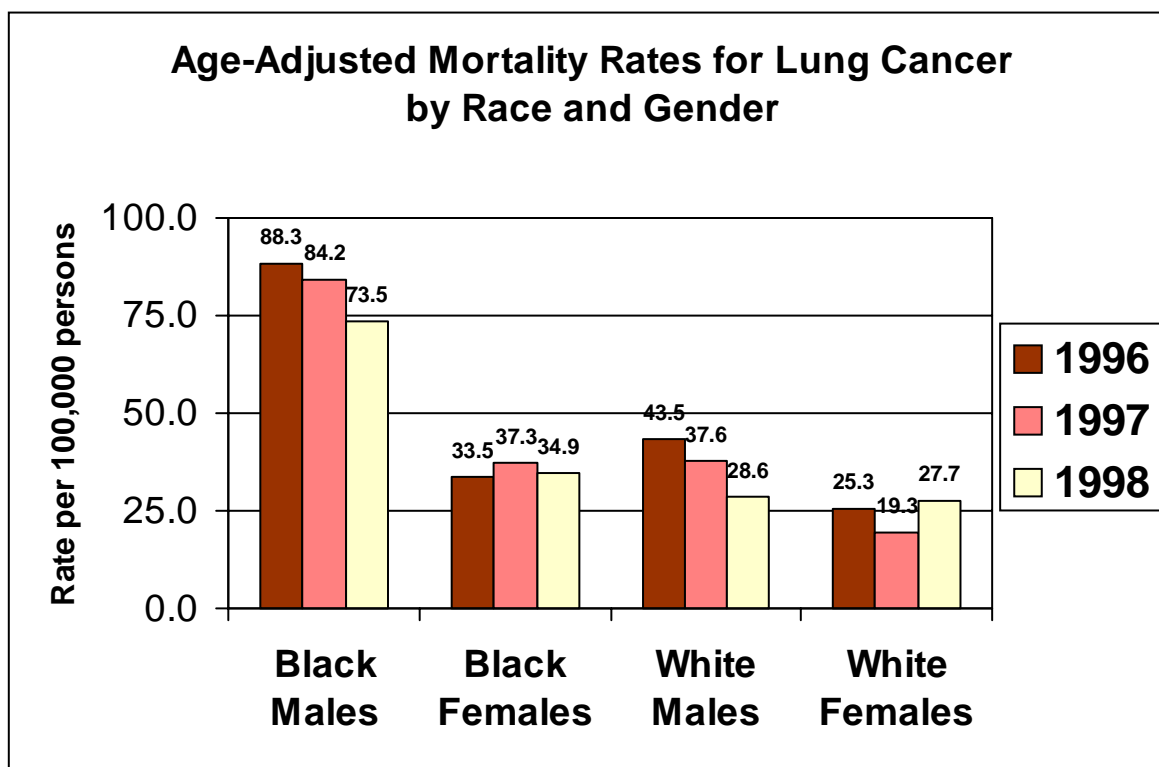
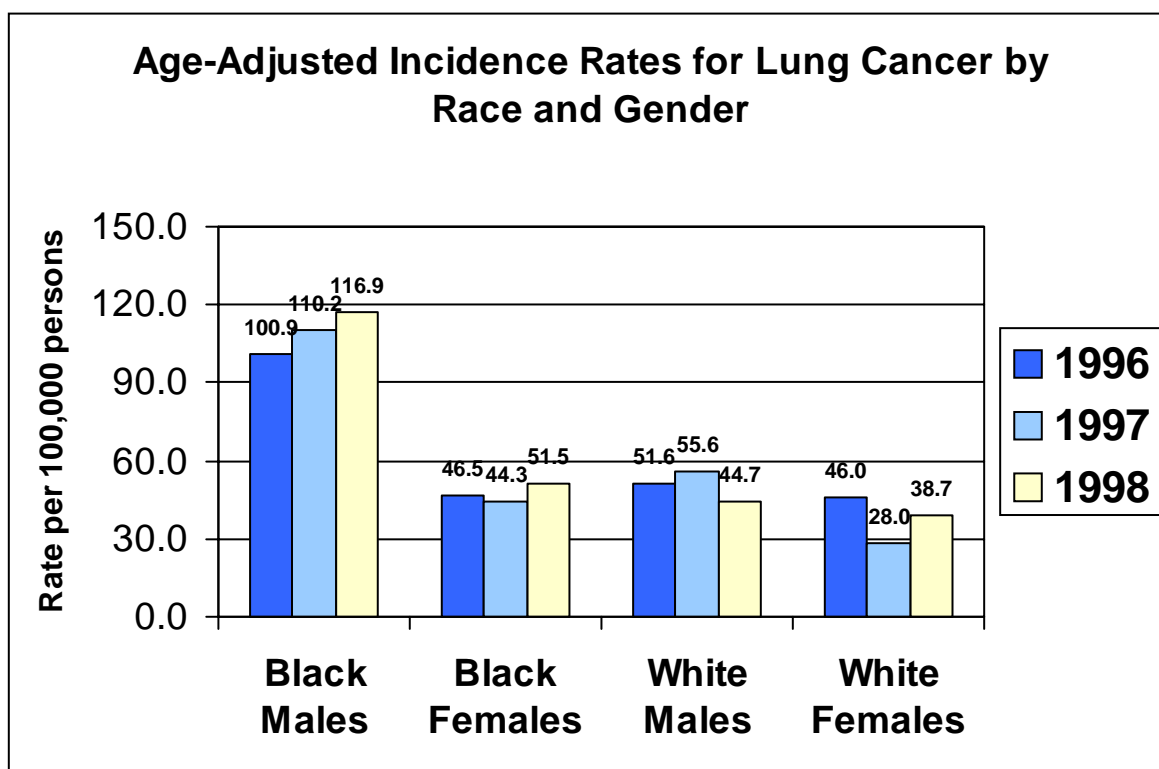
**Fig. 40: 1998 Age-Specific Incidence and Mortality Rates by Race and Gender – Lung Cancer**



**Fig. 41: 1998 Age-adjusted Cancer Incidence and Mortality Rates for Lung Cancer by Race and Sex**



**Fig. 42: 1996 to 1998 Trends in Age-Adjusted Cancer Incidence and Mortality Rates by Race and Sex – Lung Cancer**

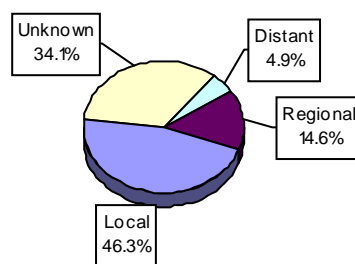


# Melanoma

## Incidence and Mortality Summary

Age-adjusted incidence rate per 100,000	Male	Female	Total
DCCR	8.7	4.1	6.0
SEER	17.3	12.0	14.3
Total # of new cases	26	15	41
# of deaths	2	3	5
Incidence rate: 6.0 (95% confidence interval: 4.1 – 7.9)			
Incidence rates by wards: Mean: 7.7 Median: 7.6 Range: 1.2 – 12.5 /100,000			

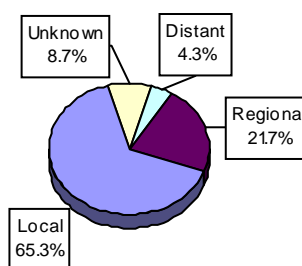
Stage at Diagnosis



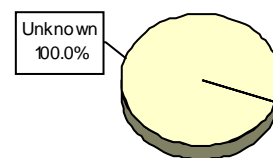
## Total Cases and Deaths by Ward

Ward	Cases	Deaths
Ward 1	6	0
Ward 2	12	1
Ward 3	12	0
Ward 4	4	2
Ward 5	0	0
Ward 6	5	0
Ward 7	1	2
Ward 8	0	0
Unknown	1	0

White



Black



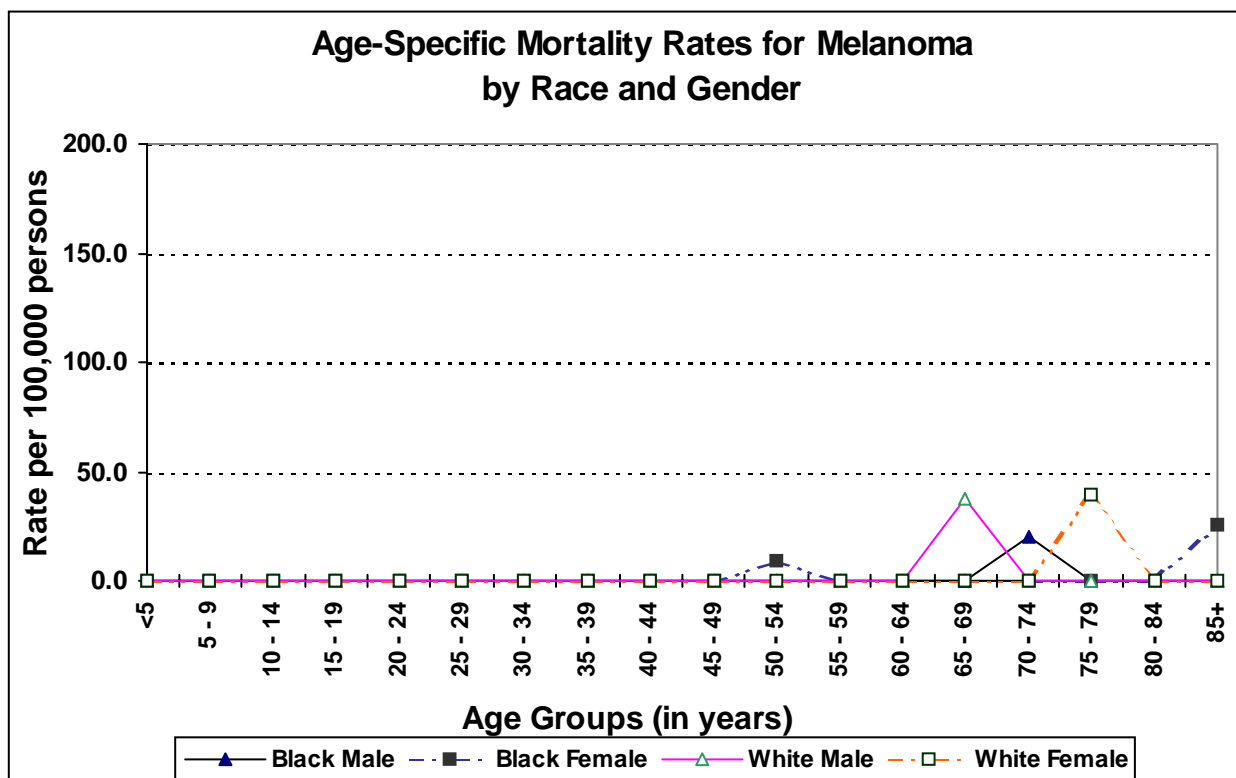
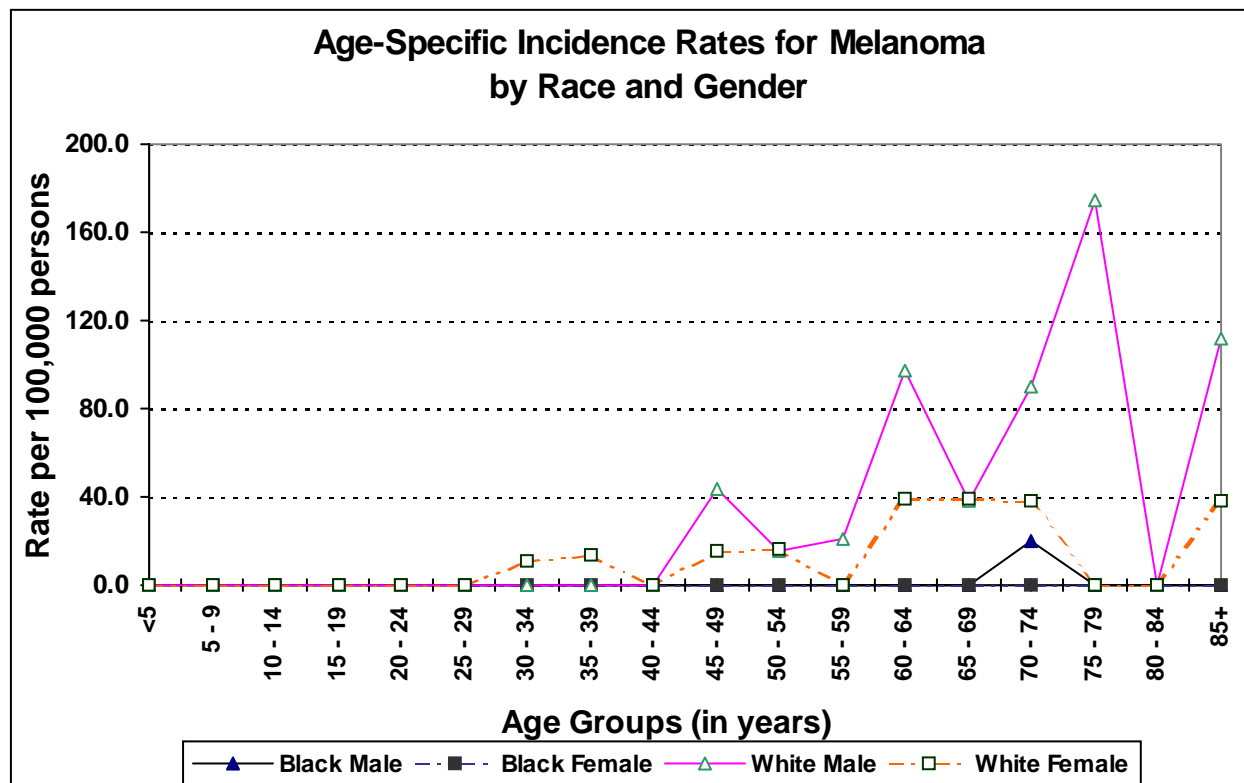
## Description

<b>Incidence</b>	The overall incidence of melanoma, 6/100,000, in the total DC population is not comparable to US rates since DC has a high proportion of African-Americans who have a very low risk of this cancer.
<b>Mortality</b>	Few deaths occur from this cancer.
<b>Age</b>	Cases begin to occur at young ages, 20-24 years and continue to increase to age 75-79 years.
<b>Race &amp; Gender</b>	The two-fold excess risk of this cancer in men compared to women is higher than the US ratio. The incidence rate for this cancer is highest in Caucasians but the rates in the white population in DC appears to be seriously under-reported. In addition, 34 percent of cases have no race identified.
<b>I/M ratio</b>	The number of deaths is too small to calculate these ratios.
<b>Trends</b>	The US data suggest that melanoma rates are increasing in recent years.
<b>Stage</b>	US data suggest that 82 percent of cases are detected at a local stage. DC data cannot be compared since 34 percent of cases have no record of stage.

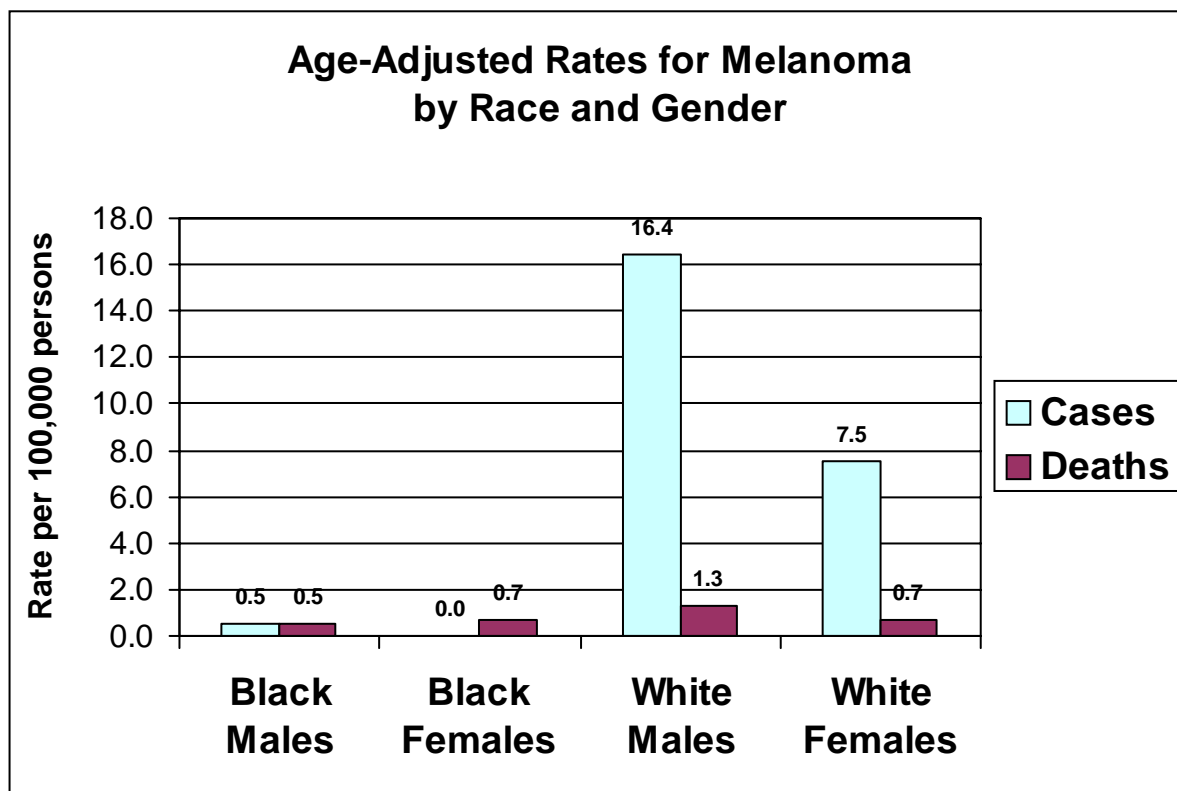
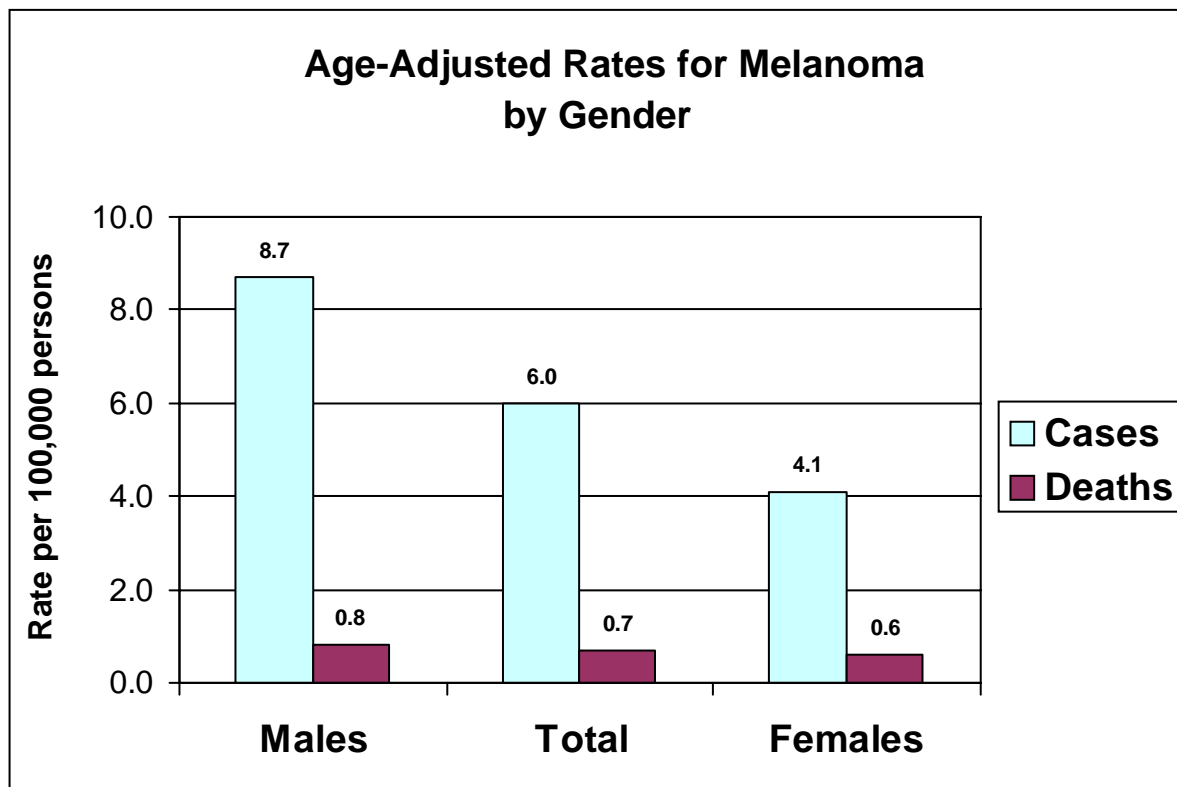
## General Risk Factors

<b>Occupation</b>	Persons working in occupations associated with increased sun exposure have a higher incidence.
<b>Other</b>	Ultraviolet light exposure, especially blistering sunburn during childhood, is a major risk factor. Melanoma has been on the increase nationally for several decades. People with light skin, individuals with numerous or atypical moles, or those with a prior or family history of melanoma are at increased risk.

**Fig. 43: 1998 Age-Specific Incidence and Mortality Rates by Race and Gender – Melanoma**



**Fig. 44: 1998 Age-adjusted Cancer Incidence and Mortality Rates for Melanoma by Race and Sex**

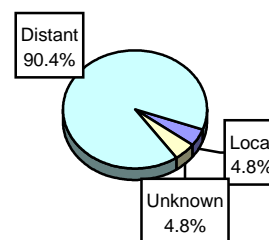


# Multiple Myeloma

## Incidence and Mortality Summary

Age-adjusted incidence rate per 100,000	Male	Female	Total
DCCR	6.0	6.8	6.4
SEER	5.3	3.5	4.3
Total # of new cases	17	25	42
# of deaths	11	18	29
Incidence rate: 6.4 (95% confidence interval: 4.4 – 8.3)			
Incidence rates by wards: Mean: 6.4 Median: 5.8 Range: 2.0 – 14.1 /100,000			

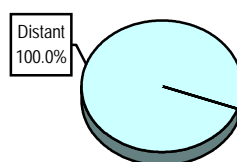
Stage at Diagnosis



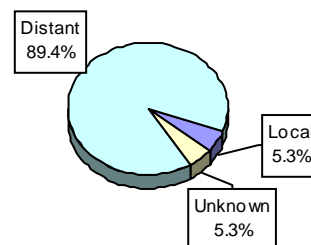
## Total Cases and Deaths by Ward

Ward	Total Cases	Deaths
Ward 1	4	2
Ward 2	4	2
Ward 3	2	3
Ward 4	6	4
Ward 5	12	5
Ward 6	6	5
Ward 7	5	6
Ward 8	3	2
Unknown	0	0

White



Black



## Description

**Incidence** The incidence rate of multiple myeloma, 6.4/100,000, is higher than the SEER rate. The cancer occurs more frequently in African-Americans than Caucasians, so both the overall incidence in DC compared to the US as well as the difference in rates by ward may reflect differences in racial distribution.

**Mortality** The death rate for this cancer is higher than reported for US but this is due to the increased proportion of African-Americans in DC since race-specific rates are actually slightly lower than US rates.

**Age** The first cases of myeloma occur at ages 40 to 44 years and then rates increase with age to peak in older ages.

**Race & Gender** Males and females have almost equal incidence rates in DC whereas US data suggest a higher rate in males (1.5 M/F ratio).

The black to white cancer ratio in DC is much higher (6.0) than that in the US (2.0). However the difference appears to be due to a low incidence of reported cancer in the white population. In fact, the rate for the black male population is slightly lower than the US while the black female rate is similar to the US.

**I/M ratio** Based on a 3-year average incidence rate, the I/M ratio for both black males and black females in DC are similar to US data. White population case numbers are too small for comparison.

**Trends** The US data suggest a decrease in the rates but DC cases are too few to estimate trends.

**Stage** Data regarding stage are not relevant for this cancer, since all cases are considered to have distant spread at time of diagnosis.



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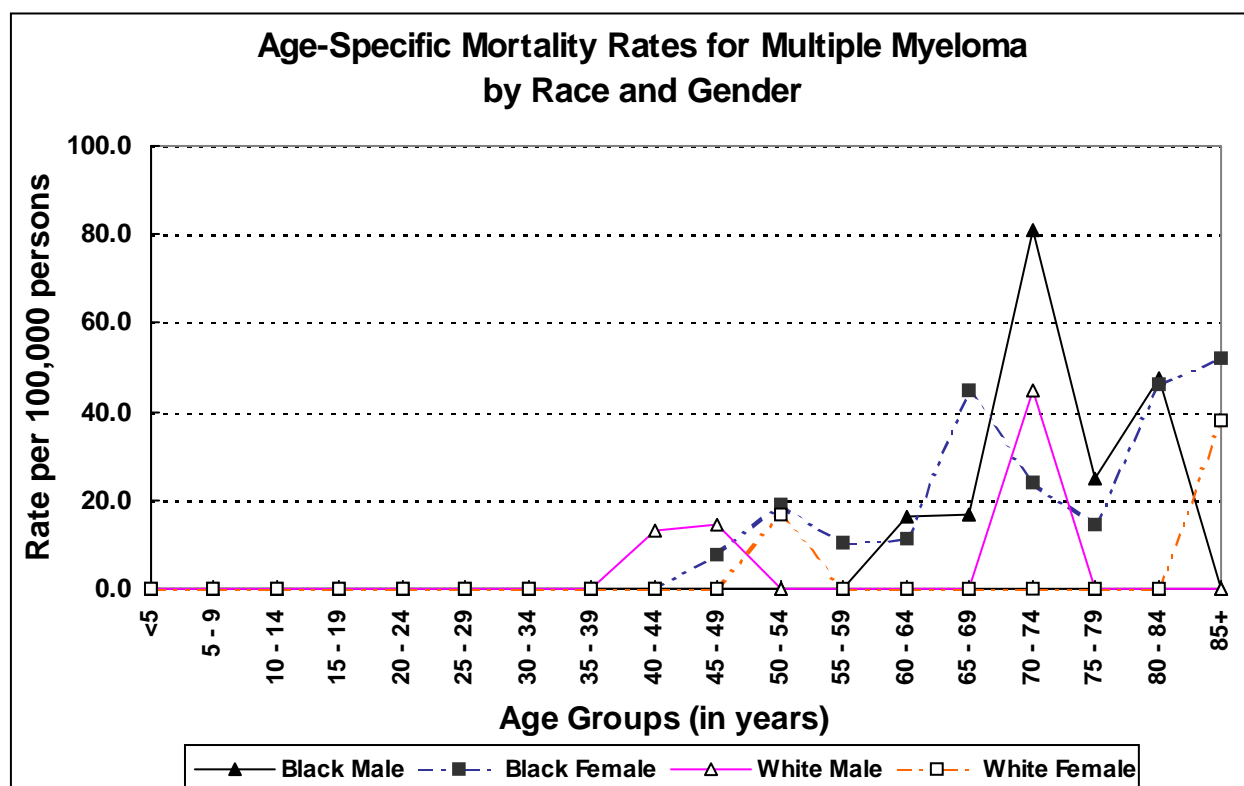
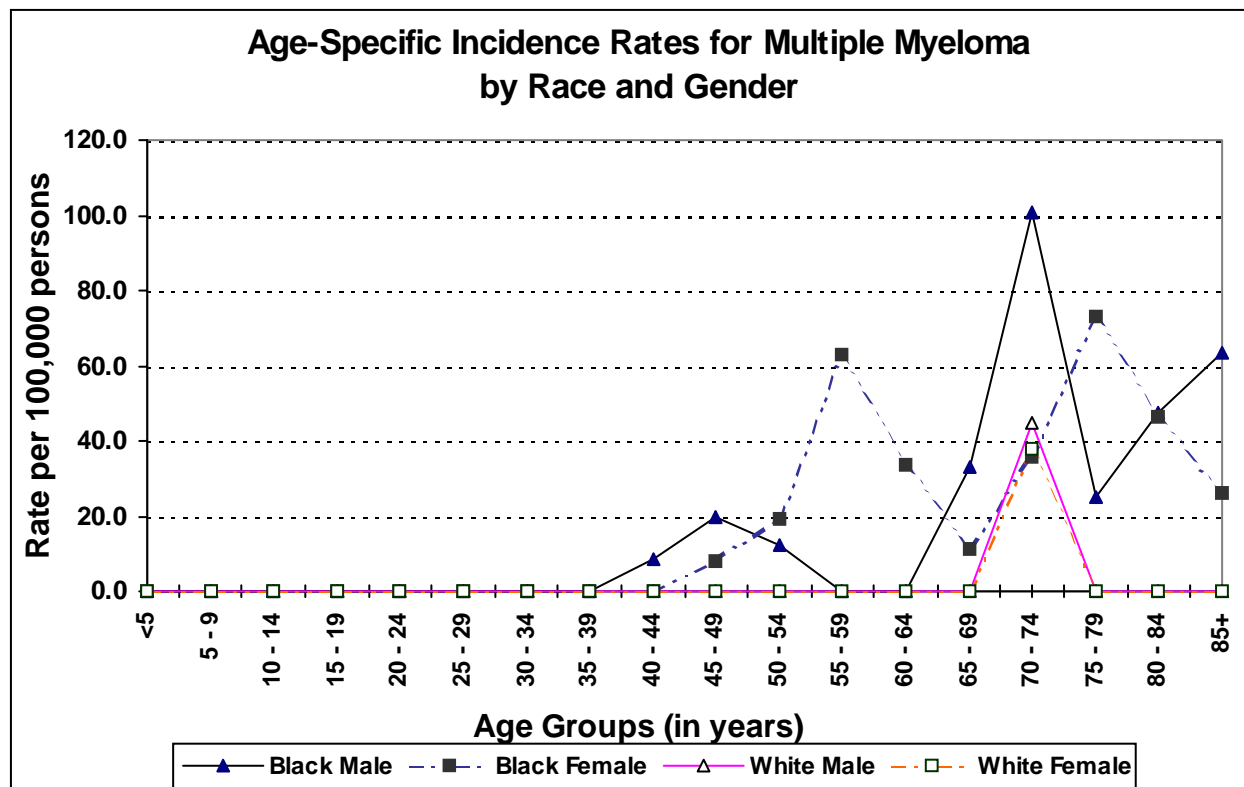
### General Risk Factors

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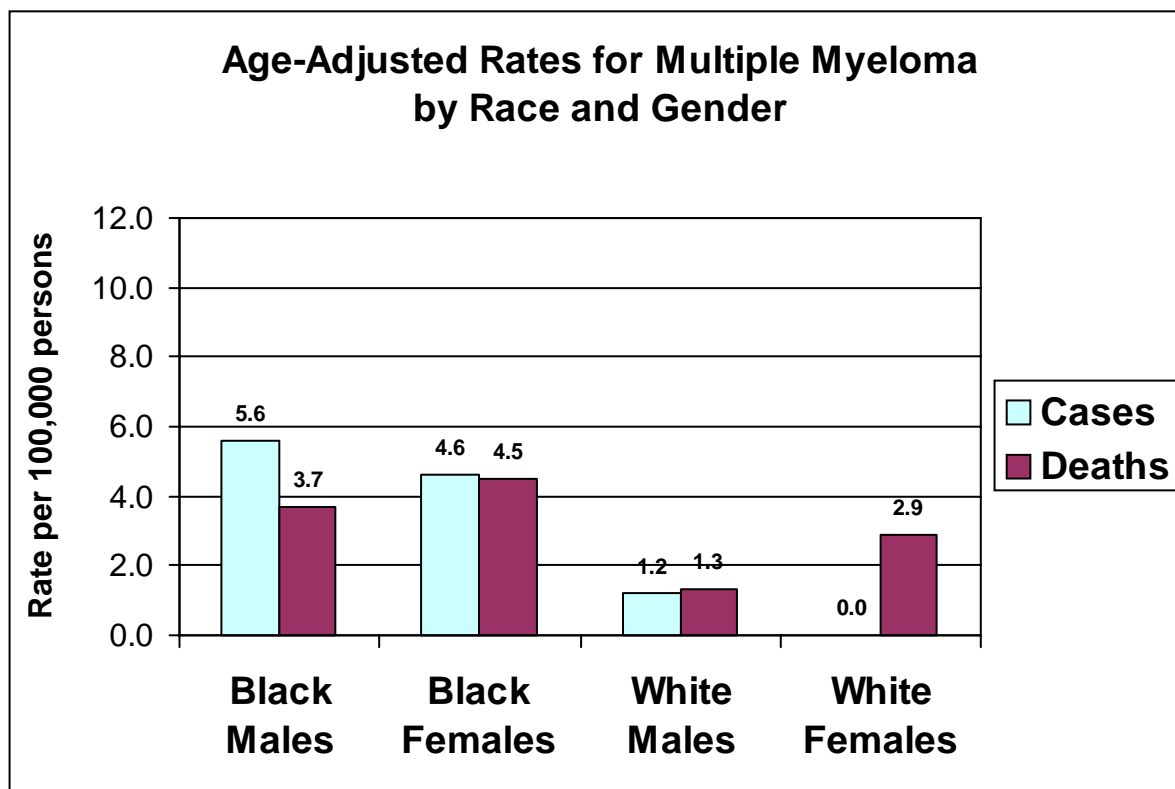
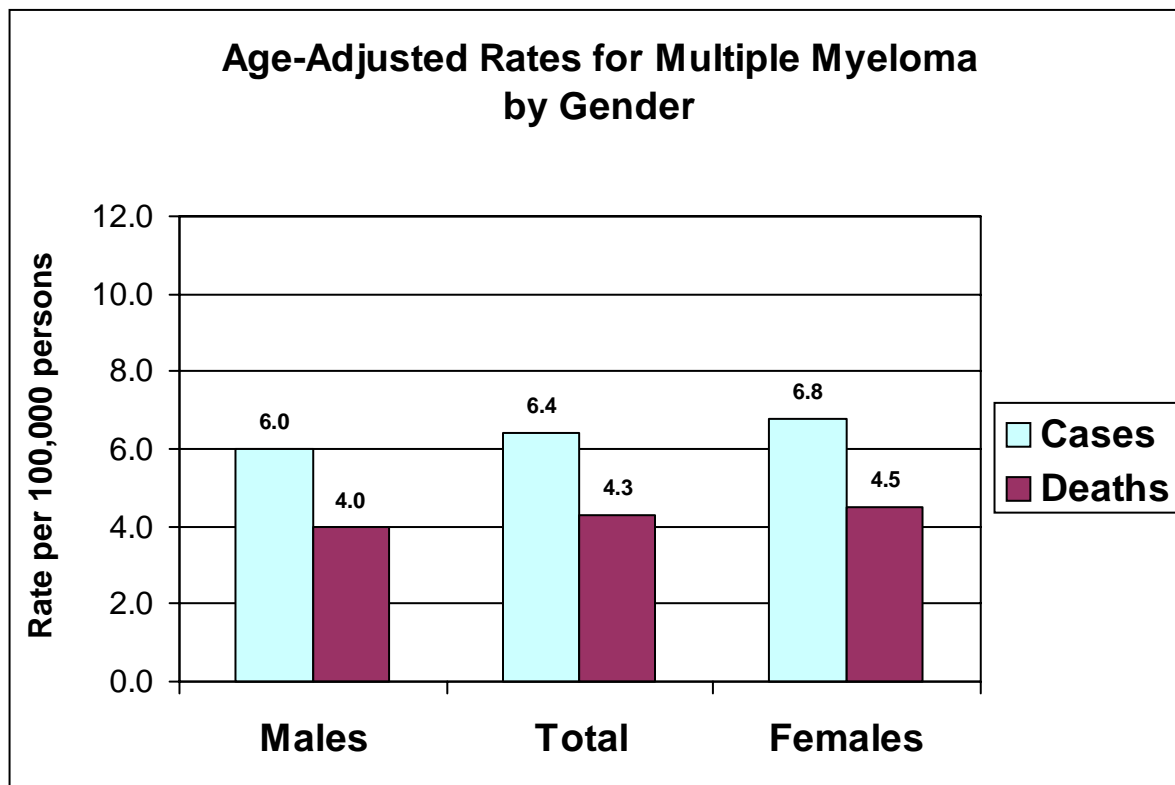
**Other** Ionizing radiation has been linked to multiple myeloma. Agricultural workers appear to be at increased risk possibly due to pesticide or other chemical use.

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**Fig. 46: 1998 Age-Specific Incidence and Mortality Rates by Race and Gender – Multiple Myeloma**



**Fig. 47: 1998 Age-adjusted Cancer Incidence and Mortality Rates for Multiple Myeloma by Race and Sex**

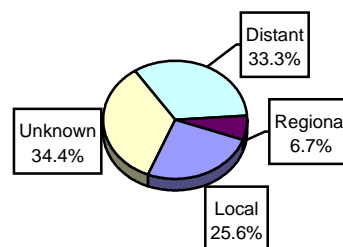


# Non-Hodgkin's Lymphoma

## Incidence and Mortality Summary

Age-adjusted incidence rate per 100,000	Male	Female	Total
DCCR	18.7	9.3	14.0
SEER	18.4	13.2	15.6
Total # of new cases	53	37	90
# of deaths	16	10	26
Incidence rate: 14.0 (95% confidence interval: 10.8 – 17.1)			
Incidence rates by wards: Mean: 13.6 Median: 14.8			
Range: 7.7 – 17.3 /100,000			

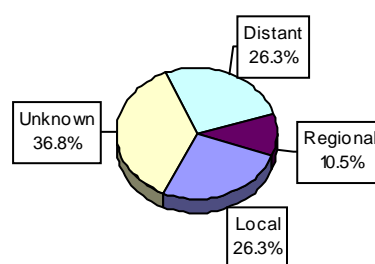
Stage at Diagnosis



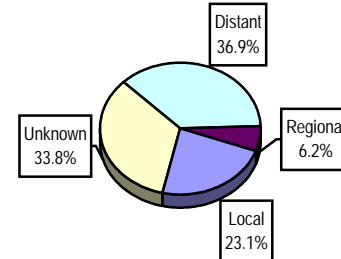
## Total Cases and Deaths by Ward

Ward	Total Cases	Deaths
Ward 1	13	2
Ward 2	14	3
Ward 3	13	9
Ward 4	11	6
Ward 5	13	1
Ward 6	12	1
Ward 7	7	2
Ward 8	5	2
Unknown	2	0

White



Black



## Description

<b>Incidence</b>	The incidence rate of non-Hodgkin's lymphoma in DC is 14.0/100,000, a rate similar to SEER data. The wards vary in incidence by over 2-fold.
<b>Mortality</b>	The death rate in DC for this cancer is 3.8/100,000, which is significantly lower than US rates. The low rates occur in both sexes primarily due to low mortality in the black population.
<b>Age</b>	The incidence by age indicates the expected bimodal peak with an increase of cancer in late childhood and another mode beginning about age 30 to 35 years and continuing into late ages. This is similar to reported national data.
<b>Race &amp; Gender</b>	Males have two times greater risk of this cancer than females in DC a slightly higher ratio than SEER. The black population has a risk which is 1.7 times higher than the white population whereas US data indicate a slight excess in the white population. The difference in DC is due to a significantly high rate in black males and a significantly low rate in white males compared to the US. The age-specific rates for black males suggest the incidence may have three modes. In addition to the recognized childhood mode, a second increase in rates occurs between ages 25 through 60 and a third at ages 70 plus years. The second mode maybe related to HIV infections in DC. The white males have too few cases in a single year to determine any pattern by age.
<b>I/M ratio</b>	The I/M ratios for both sexes in the black population in DC show very high values compared to US data. This difference is related both to the high incidence and low mortality reported in DC.
<b>Trends</b>	The black male risk for this cancer appears to be increasing and the white male rate declining in DC but the number of cases per year is small. Female rates appear to be stable. The US rates indicate non-significant changes in rates in recent years.

**Stage** SEER data do not report proportions of cancer by stage for this cancer since most cases are considered to have a distant spread at diagnosis.

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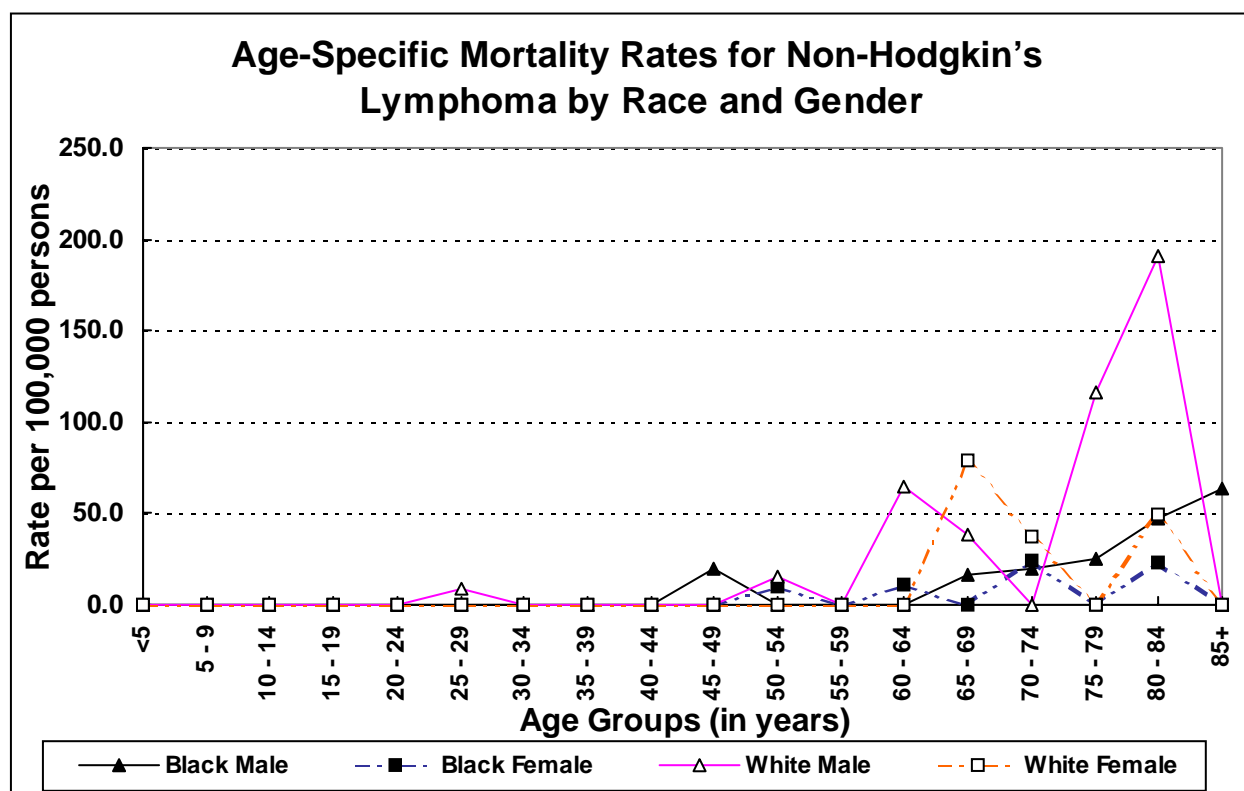
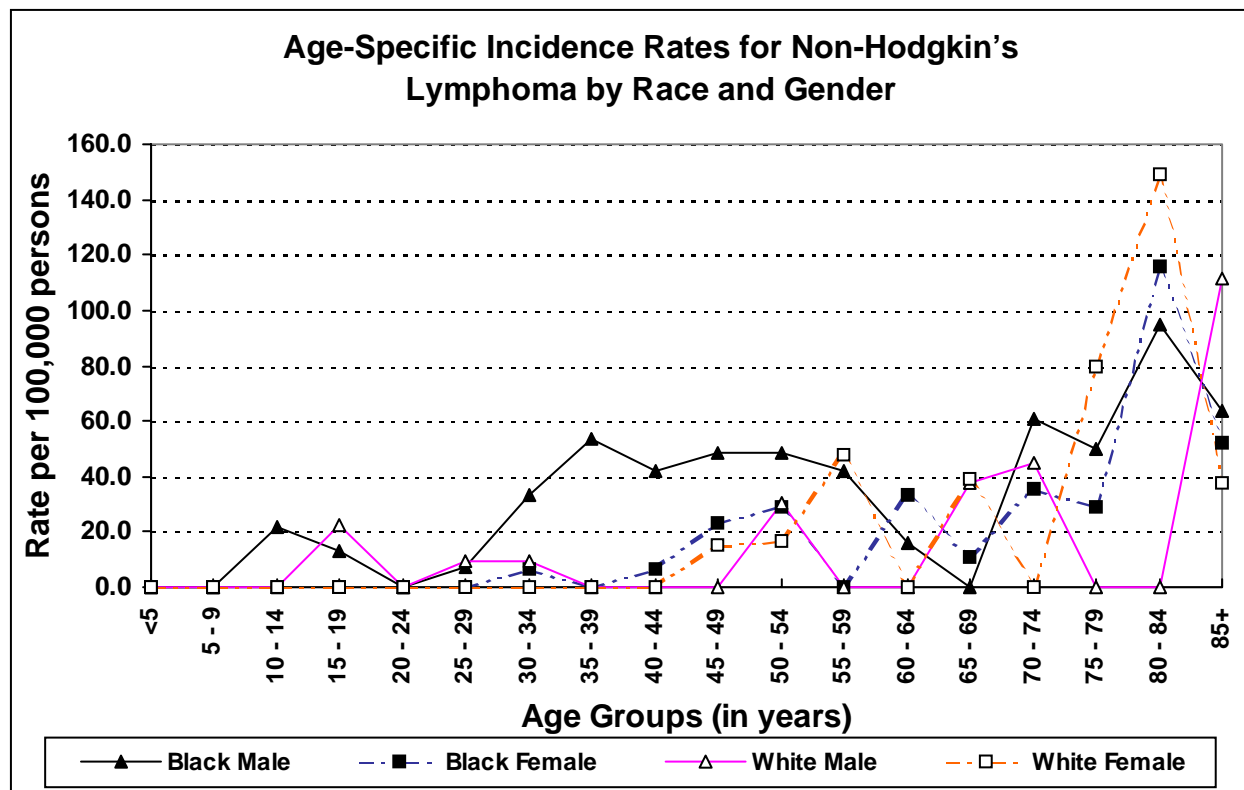
### General Risk Factors

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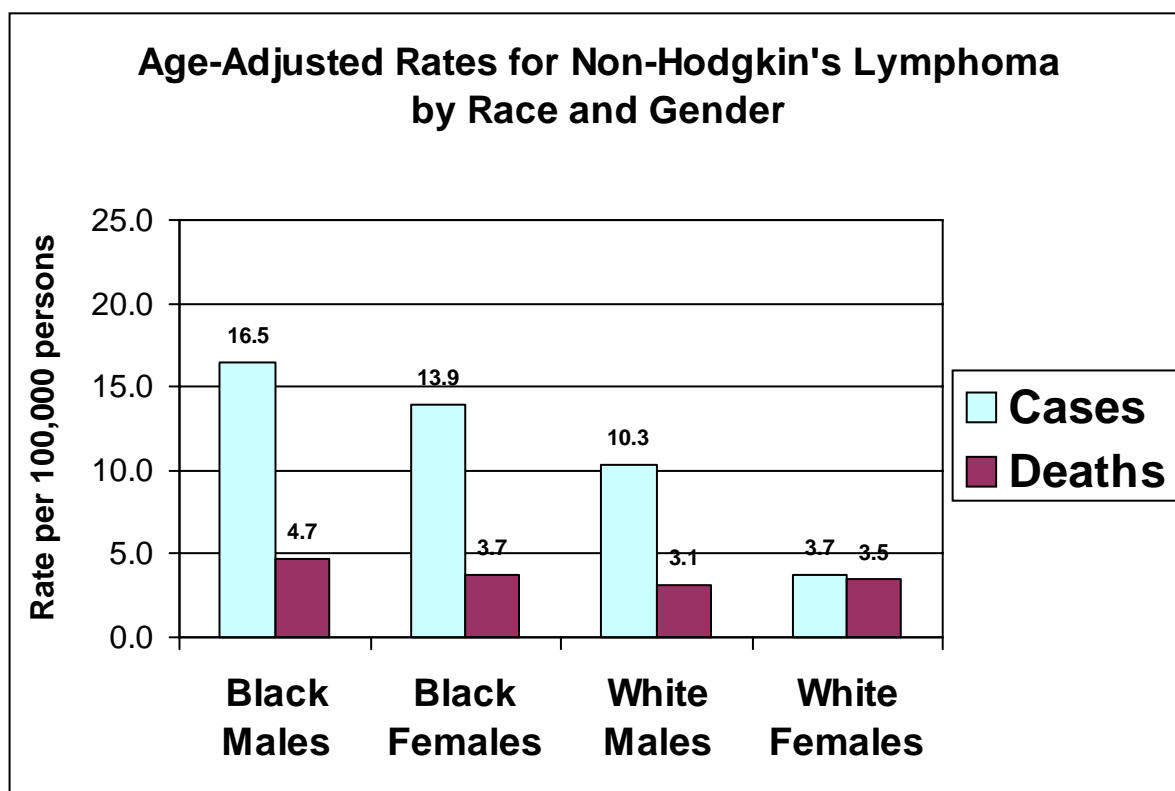
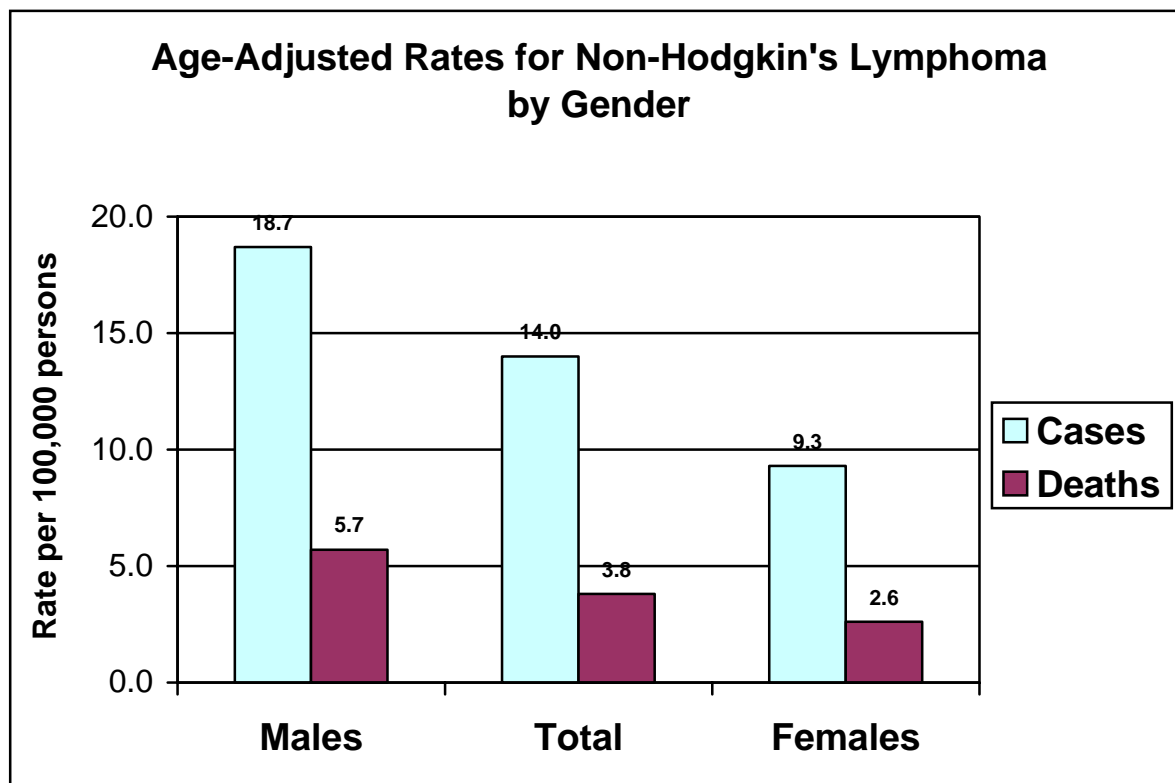
**Other** Non-Hodgkin's lymphoma (NHL) develops with increased frequency in individuals infected with certain viruses, particularly the human immunodeficiency virus (HIV), which causes acquired immunodeficiency syndrome (AIDS). AIDS patients have a risk of contracting NHL 60 times greater than in the general population. Other immunodeficient states, whether genetic or induced (e.g. kidney transplant patients) are also associated with high risk. Exposures to agricultural chemicals and high-dose radiation exposures have also been implicated.

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**Fig. 49: 1998 Age-Specific Incidence and Mortality Rates by Race and Gender – Non-Hodgkin’s Lymphoma**



**Fig. 50: 1998 Age-Adjusted Incidence and Mortality Rates for Non-Hodgkin's Lymphoma by Race and Sex**

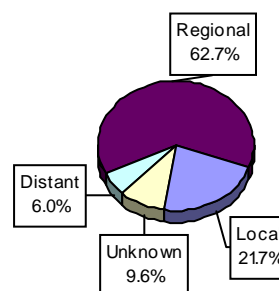


# Oral Cavity and Pharynx

## Incidence and Mortality Summary

Age-adjusted incidence rate per 100,000	Male	Female	Total
DCCR	26.0	4.2	13.9
SEER	13.6	5.6	9.3
Total # of new cases	69	14	83
# of deaths	17	6	23
Incidence rate: 13.9 (95% confidence interval: 10.9 – 16.9)			
Incidence rates by wards: Mean: 13.8 Median: 14.0 Range: 7.1 – 22.0 /100,000			

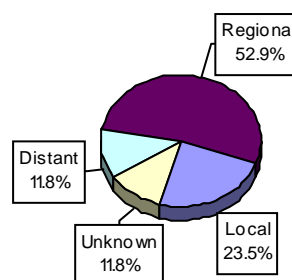
Stage at Diagnosis



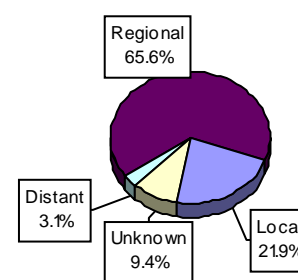
## Total Cases and Deaths by Ward

Ward	Cases	Deaths
Ward 1	17	7
Ward 2	9	2
Ward 3	7	1
Ward 4	12	4
Ward 5	9	1
Ward 6	12	3
Ward 7	12	2
Ward 8	5	3
Unknown	0	0

White



Black



## Description

<b>Incidence</b>	The incidence rate in DC, 13.9/100,000, is significantly higher than the SEER rate. The difference from the lowest to highest ward is 3-fold.
<b>Mortality</b>	The death rate is 3.8/100,00, a rate that is higher than US but not significantly different.
<b>Age</b>	This cancer first occurs after age 40 and rates peak at age groups 50 to 60, subsequently declining. This pattern is most marked in the black male population and is similar to characteristics seen in SEER data. This pattern is different from age distributions for many cancers associated with aging.
<b>Race &amp; Gender</b>	The male rate for this cancer is 6 times higher than the female rate in DC, whereas the SEER ratio is only 2.5. The black population has almost a 2-fold higher risk of the cancer compared to the white population. Only black males have an incidence rate that is significantly higher than US data and this accounts for the high overall incidence rate for DC compared to the US.
<b>I/M ratio</b>	The incidence/mortality ratios in SEER are about 4 for all race-gender groups except black males who have a ratio of about 3. Using a three-year average incidence rate the I/M ratio is higher for DC males than in the US, based primarily on high incidence in black males and only slightly higher mortality compared to the US.
<b>Trends</b>	SEER rates are declining in recent years. The rates for DC over three years are based on a small number of cases per year for all race-gender groups except black males. For this group the trend seems to be increasing.
<b>Stage</b>	The stage of oral cancers in DC suggests that the cases are more likely to be diagnosed at a regional than local stage for DC residents compared to the US. The proportion of distant stage cases is about the same. SEER reports a 2 – 2.5 fold



difference in 5-year survival between these two stages.

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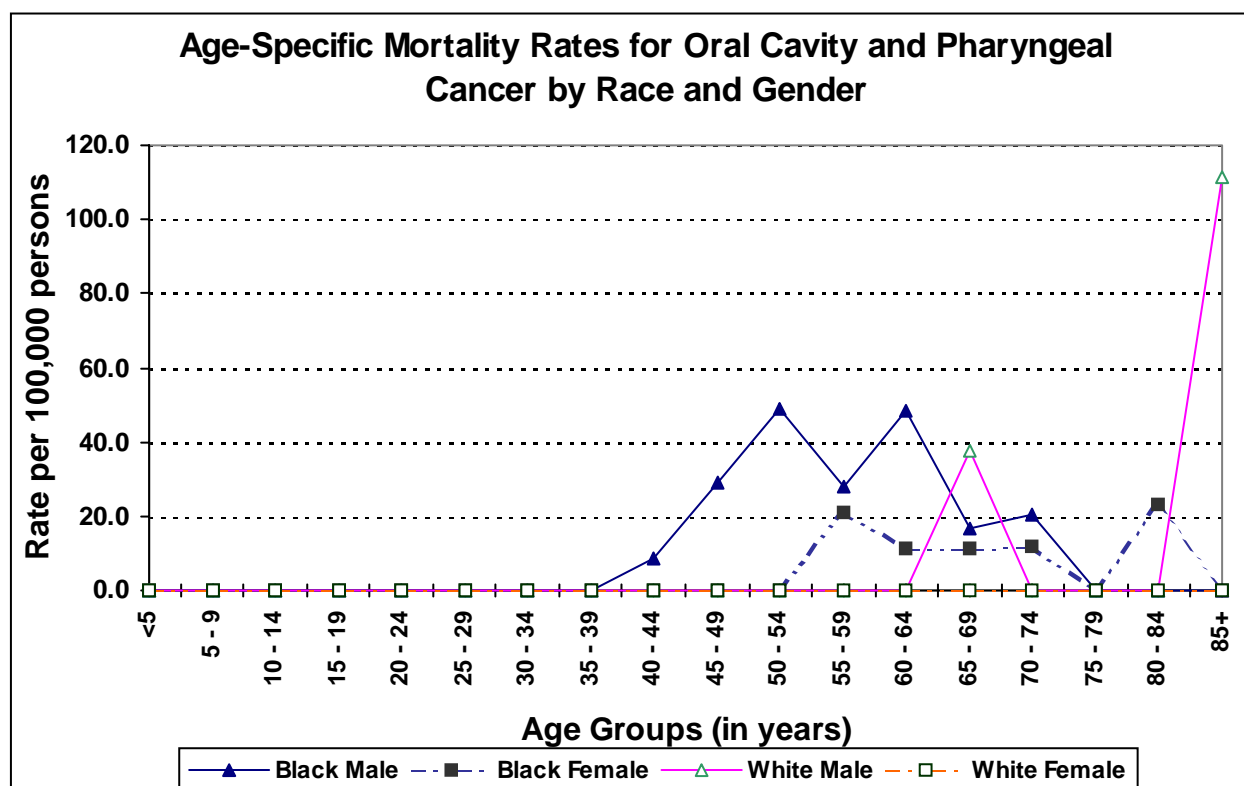
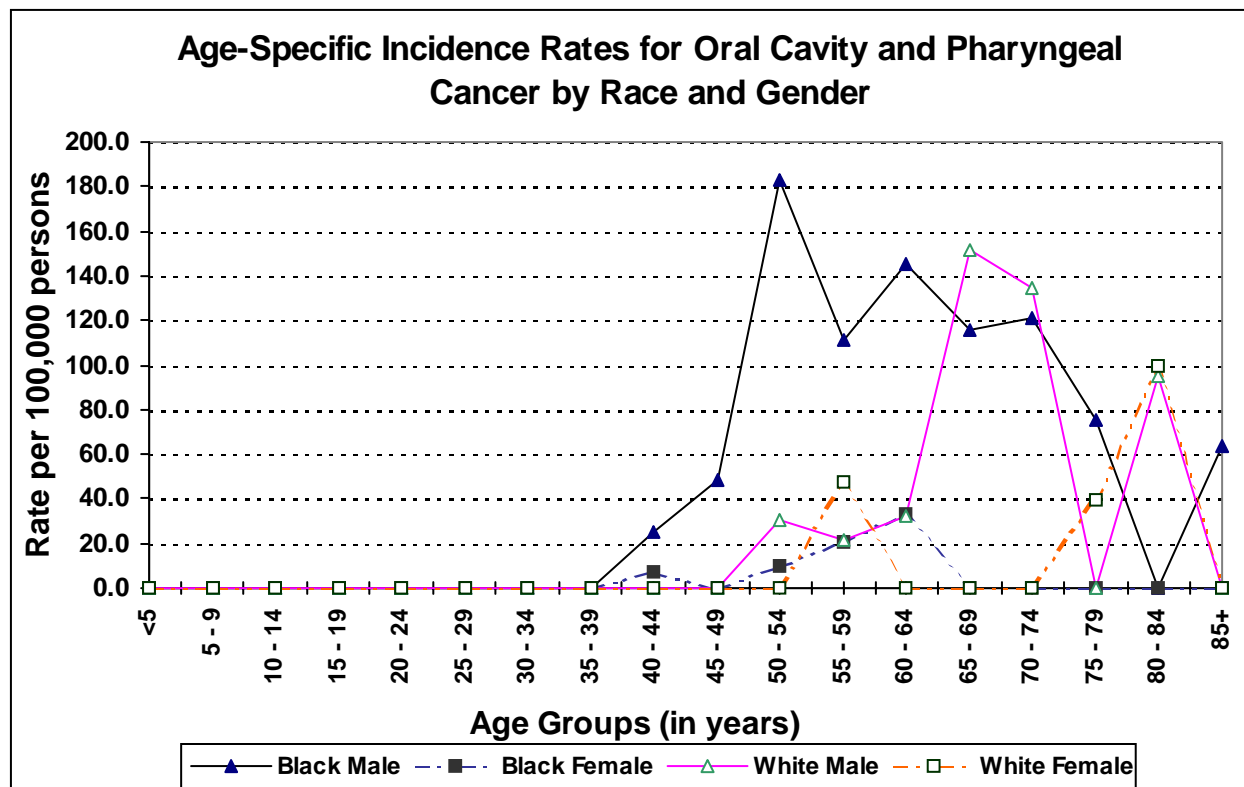
**General Risk Factors**

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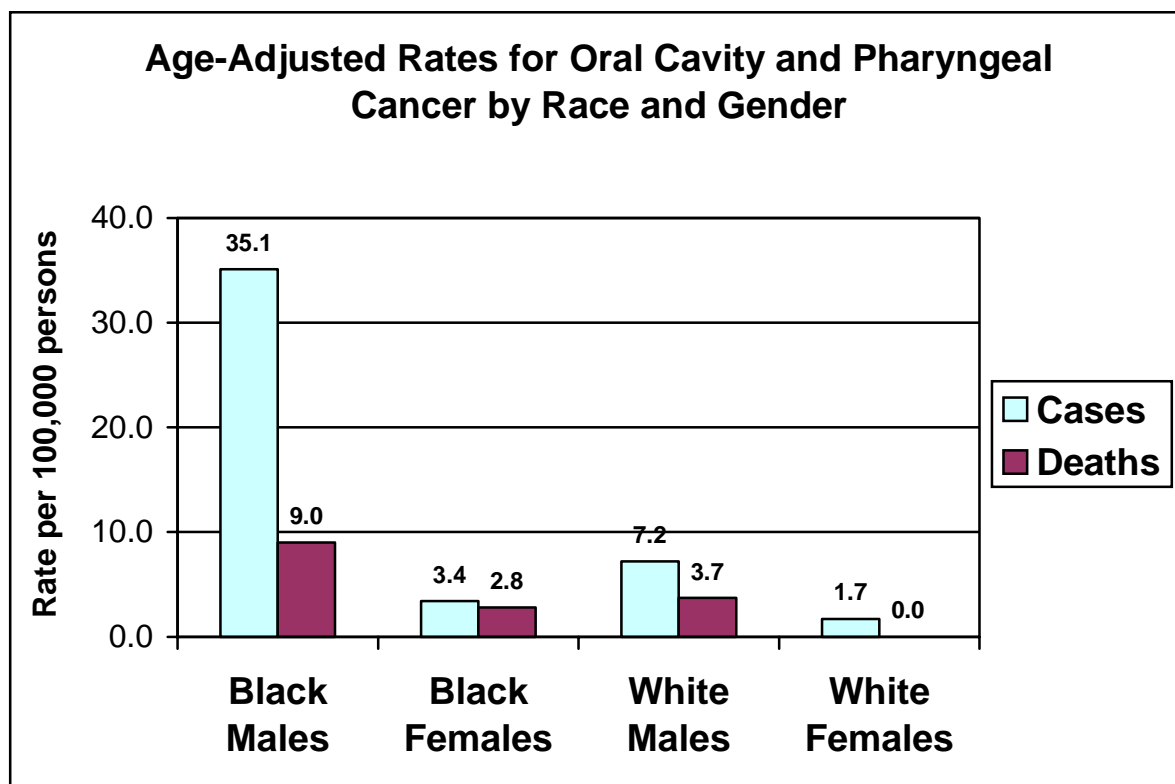
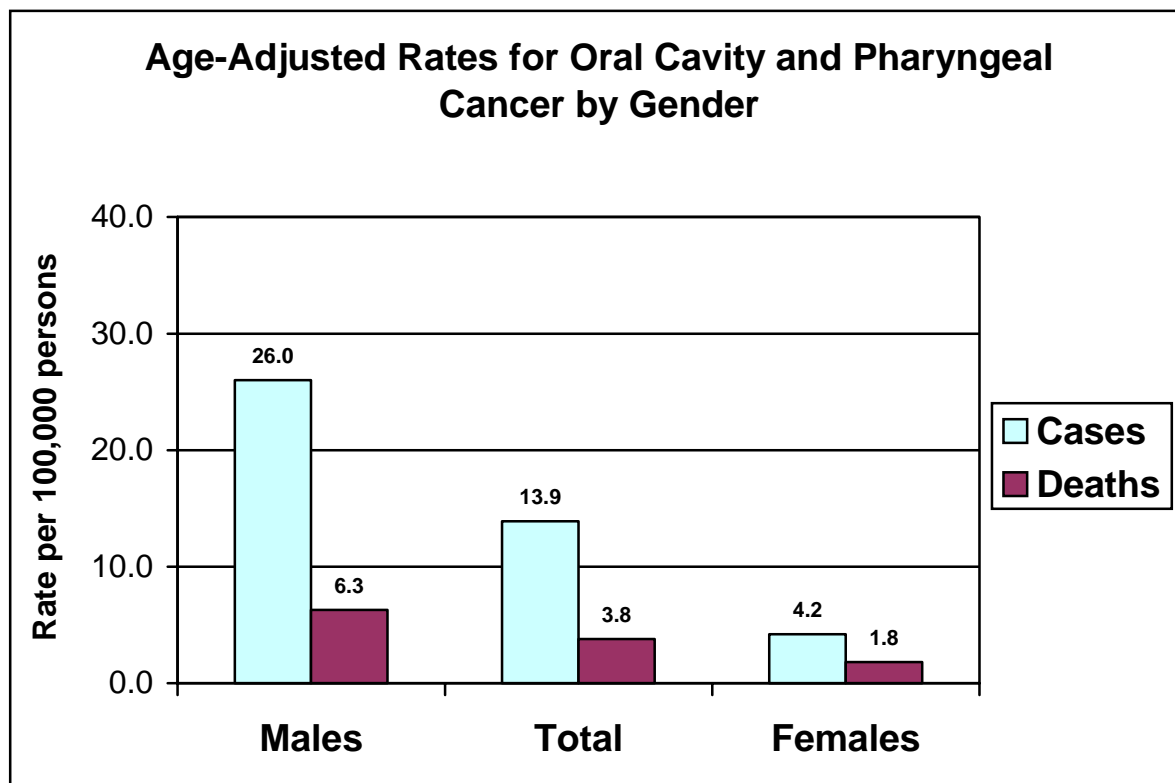
<b>Smoking</b>	Smoking and chewing tobacco are major risk factors for cancer of the oral cavity and pharynx.
<b>Diet</b>	Diets consistently high in fresh fruits, vegetables, vitamins A, C, and E, and carotenoids may be protective.
<b>Other</b>	Alcohol use is a major risk factor, especially if excessive. Tobacco and alcohol use account for approximately three fourths of all oral cancer in the United States. Combined exposure to tobacco and alcohol results in a higher risk than either alone.

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**Fig. 52: 1998 Age-Specific Incidence and Mortality Rates by Race and Gender – Oral Cavity and Pharyngeal Cancer**



**Fig. 53: 1998 Age-Adjusted Incidence and Mortality Rates for Oral Cavity and Pharyngeal Cancer by Race and Sex**

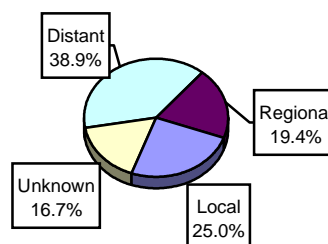


# Ovary

## Incidence and Mortality Summary

Age-adjusted incidence rate per 100,000	Male	Female	Total
DCCR	-	10.3	
SEER	-	14.5	
Total # of new cases	-	36	36
# of deaths	-	20	20
Incidence rate: 10.3 (95% confidence interval: 6.8 – 13.7)			
Incidence rates by wards: Mean: 9.8 Median: 9.0 Range: 5.4 – 15.8/100,000			

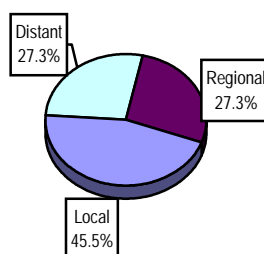
Stage at Diagnosis



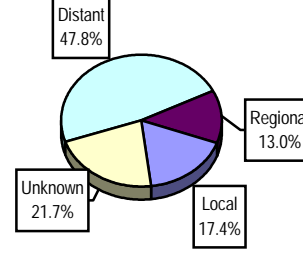
## Total Cases and Deaths by Ward

Ward	Cases	Deaths
Ward 1	8	3
Ward 2	4	3
Ward 3	6	4
Ward 4	4	2
Ward 5	5	2
Ward 6	3	2
Ward 7	2	4
Ward 8	3	0
Unknown	1	0

White



Black



## Description

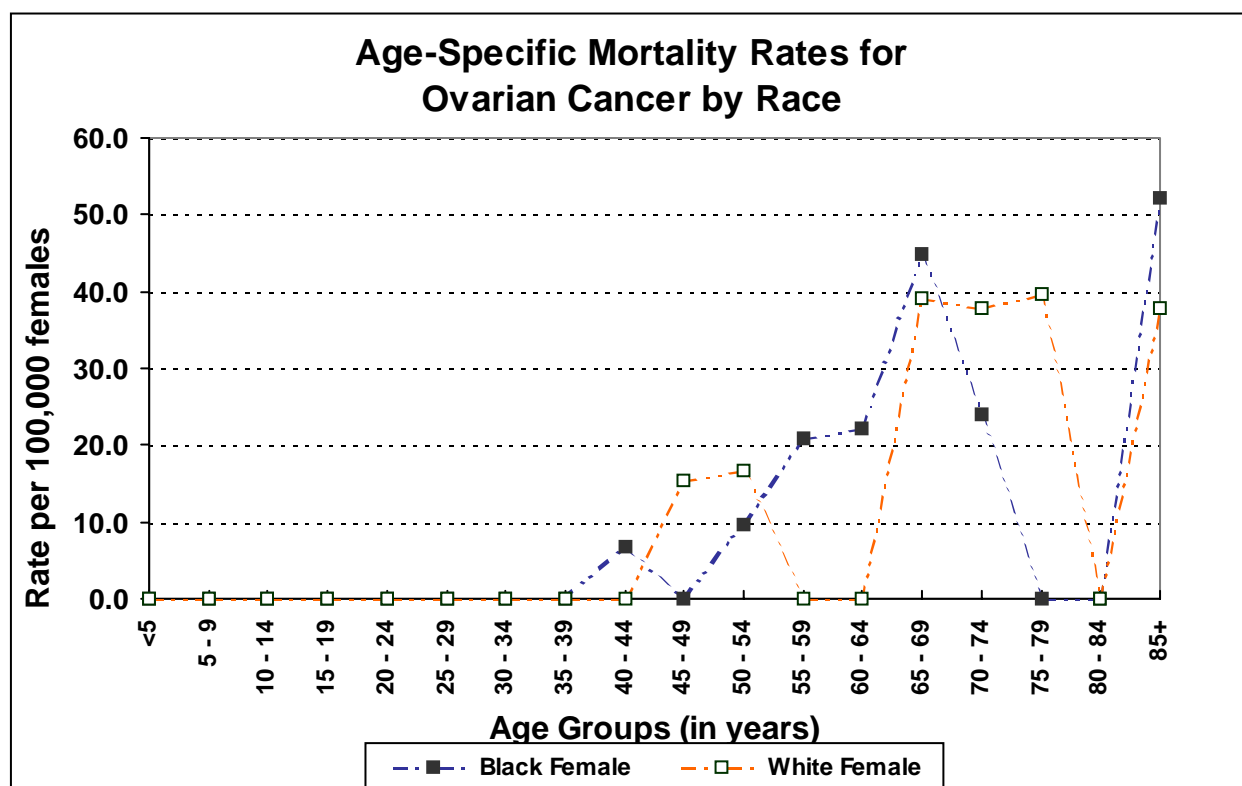
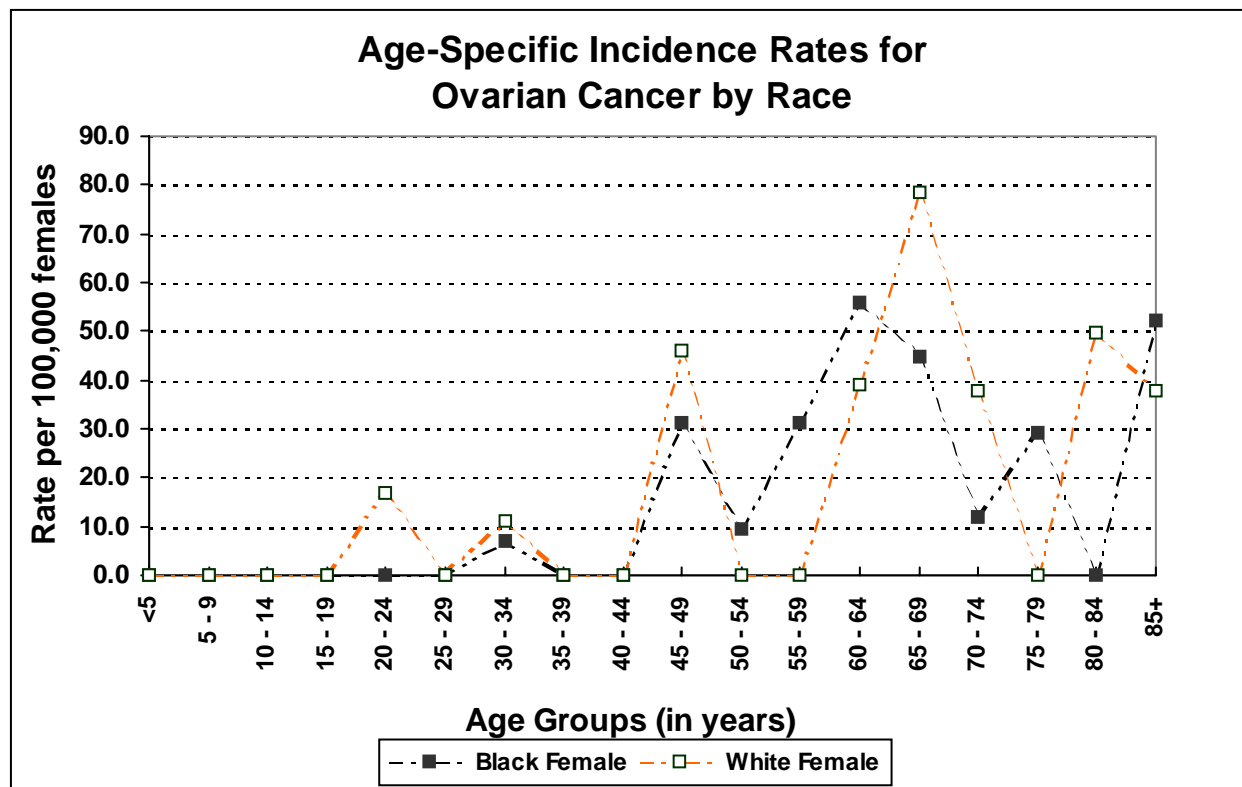
<b>Incidence</b>	The rate of ovarian cancer is 10.3/100,000 in DC, a value significantly lower than the SEER rate. The number of cases per ward are too small for comparison.
<b>Mortality</b>	The mortality rate is 5.4/100,000 for DC which is lower than the US rate.
<b>Age</b>	Except for a few sporadic cases, the incidence begins about age 40 and peaks between ages 60 to 69 after which the incidence falls.
<b>Race &amp; Gender</b>	The incidence rates in white and black women in DC are almost equal compared to the 1.5-fold excess risk of this cancer in white versus black women for the US. Thus the low incidence of this cancer in DC is probably not due to the differences in racial distribution in the city versus the US but to low rates in white women.
<b>I/M ratio</b>	The I/M ratio for black women in DC using a 3 year average is higher, 1.8, compared to white women, 1.6. The ratio for black women is similar to that of the US, but the ratio for white women is lower because of a low incidence but equal mortality compared to the US.
<b>Trends</b>	The incidence of ovarian cancers is decreasing for all US women and, although numbers are small, the rates also seem to be declining in DC.
<b>Stage</b>	The stages at diagnosis of cases in DC indicate that 25 percent of cases are diagnosed at the local stage, similar to SEER data. Only 39 percent are diagnosed at a distant stage in DC, which is much lower than the 60 percent reported in SEER data suggesting somewhat earlier stages at diagnosis in DC than in the US. However, black women in DC are more likely to be diagnosed at later stages, although US data show little difference in stage by race.

## General Risk Factors

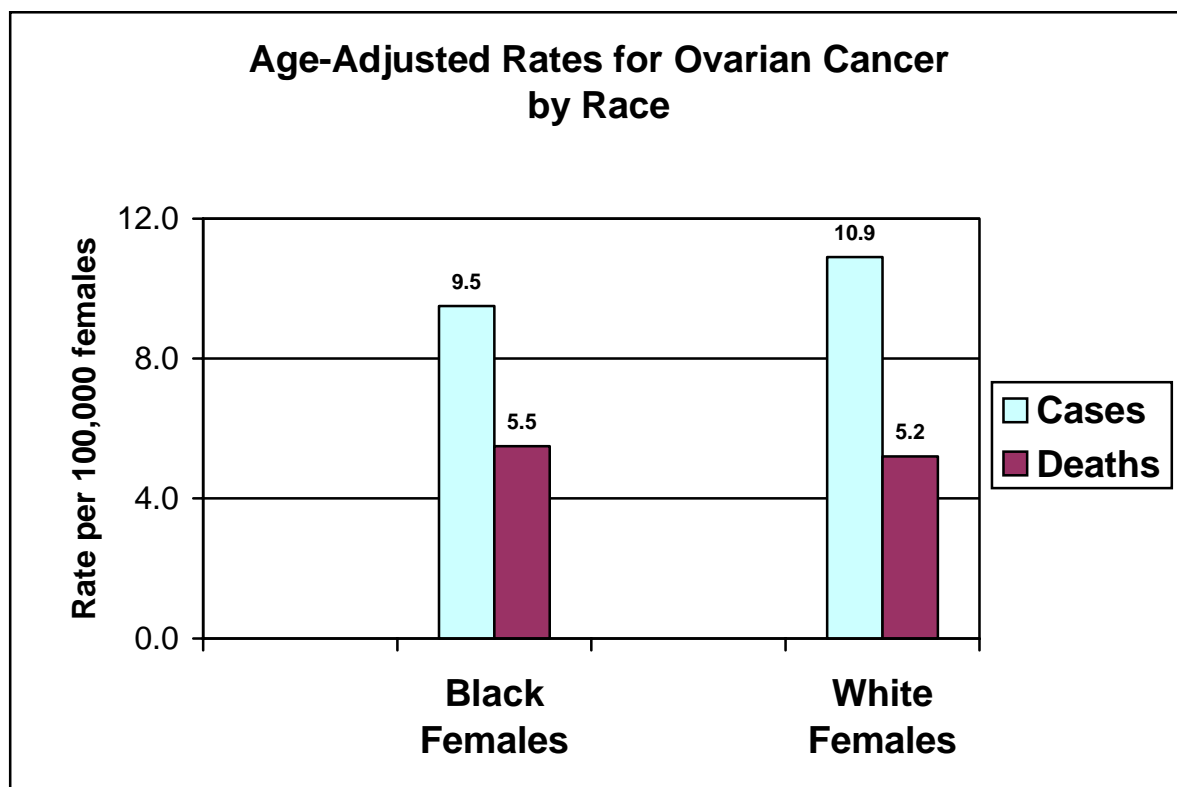
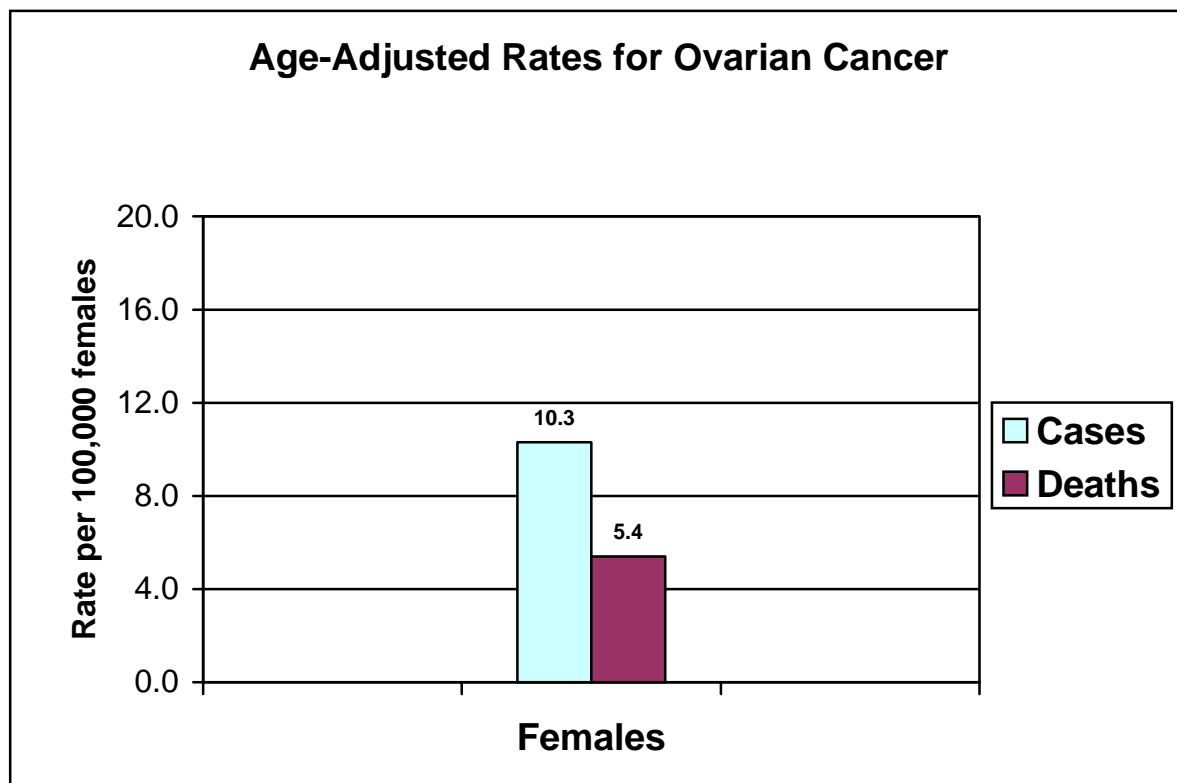
**Diet** Dietary fat may play a role in increased risk.  
**Other** Women who have undergone tubal ligation or hysterectomy appear to be at decreased risk.

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**Fig. 55: 1998 Age-Specific Incidence and Mortality Rates by Race – Ovarian Cancer**



**Fig. 56: 1998 Age-Adjusted Incidence and Mortality Rates for Ovarian Cancer by Race**

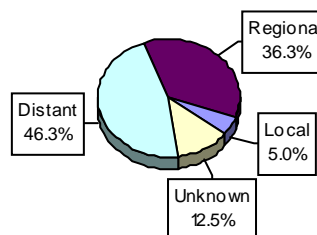


# Pancreas

## Incidence and Mortality Summary

Age-adjusted incidence rate per 100,000	Male	Female	Total
DCCR	14.6	9.2	11.6
SEER	9.9	7.7	8.7
Total # of new cases	39	41	80
# of deaths	25	29	54
Incidence rate: 11.6 (95% confidence interval: 9.0 – 14.3)			
Incidence rates by wards: Mean: 11.7 Median: 13.2 Range: 6.7 – 15.9 /100,000			

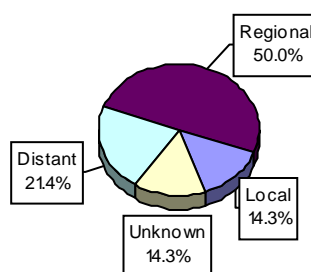
Stage at Diagnosis



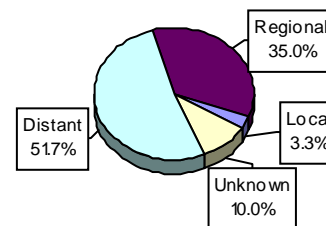
## Total Cases and Deaths by Ward

Ward	Cases	Deaths
Ward 1	6	5
Ward 2	7	2
Ward 3	11	8
Ward 4	14	14
Ward 5	12	7
Ward 6	13	8
Ward 7	11	5
Ward 8	6	5
Unknown	0	0

White



Black



## Description

<b>Incidence</b>	The incidence rate in DC is 11.6/100,000, a rate that is one-third higher than the SEER rate but is not significant. The incidence rates varied by ward with a 2.4-fold difference between extremes.
<b>Mortality</b>	The mortality rate in DC is 7.6/100,000, a rate that is slightly lower than the US rate.
<b>Age</b>	Cases begin to occur at age 35-39 and the rates increase to ages of 80 plus.
<b>Race &amp; Gender</b>	Males have a 1.6 times higher risk than females in DC, a slightly higher predominance of male to female rates than in SEER data, 1.3. The black to white ratio in DC is 1.8 which is slightly higher than reported in SEER rates. The increased risk of pancreatic cancer in blacks compared to whites probably explains the higher incidence of this cancer in the DC population with its higher proportion of African-Americans compared to the US. The race-gender specific rates are similar to the rates for SEER except for white female rates which are lower. Thus no specific group has higher rates which might explain the DC excess.
<b>I/M ratio</b>	The I/M ratio for the DC population in 1998 suggests that the incidence is slightly higher than the mortality with a ratio of 1.5. However, the three-year averages for incidence and mortality rates suggest that the incidence is only slightly higher than the mortality for all race-gender groups indicating the poor survival which is associated with this cancer.
<b>Trends</b>	SEER data indicate that there has been a slight decline in incidence in the past 5 years. DC has few cases in each race-gender group for each year, but the data suggest that black rates may be increasing, not declining.
<b>Stage</b>	Only about 5 percent of pancreatic cancers in DC are detected at a local stage and 46 percent at a distant stage. These figures are similar to the distribution by stage



reported in SEER data.

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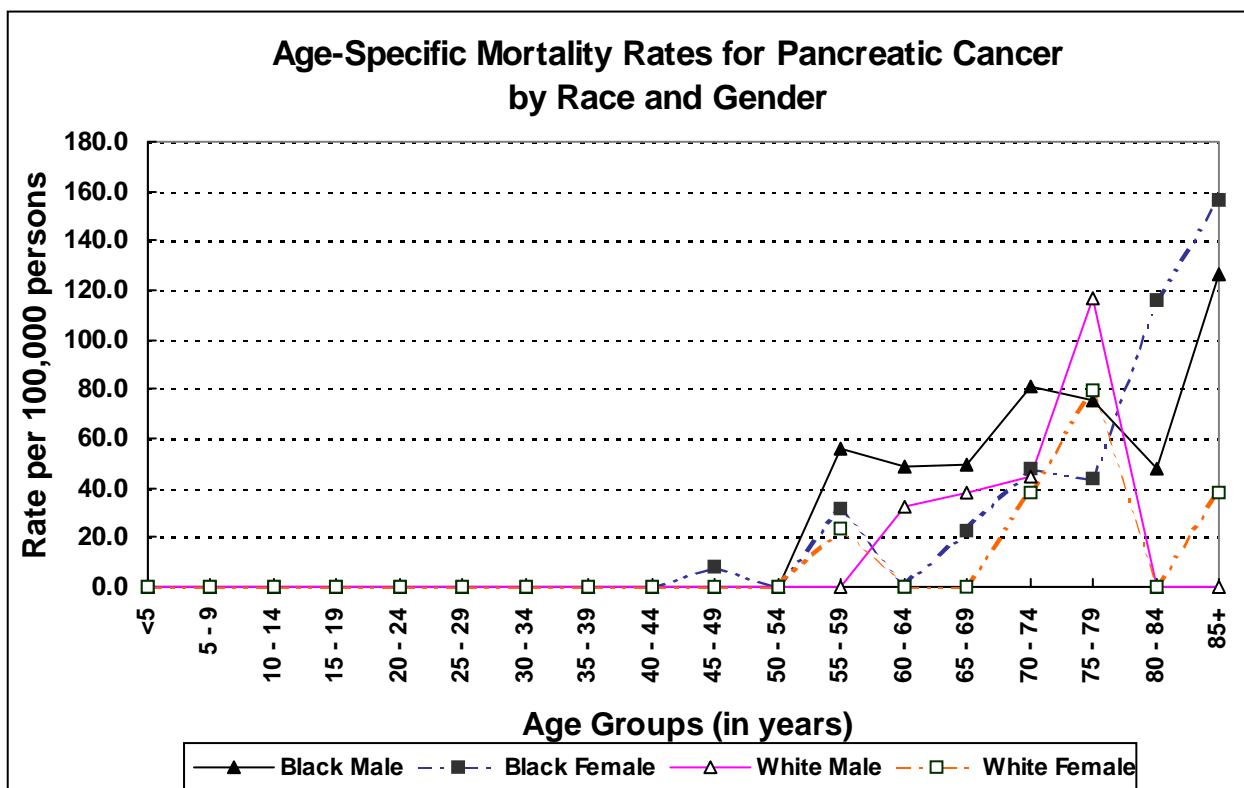
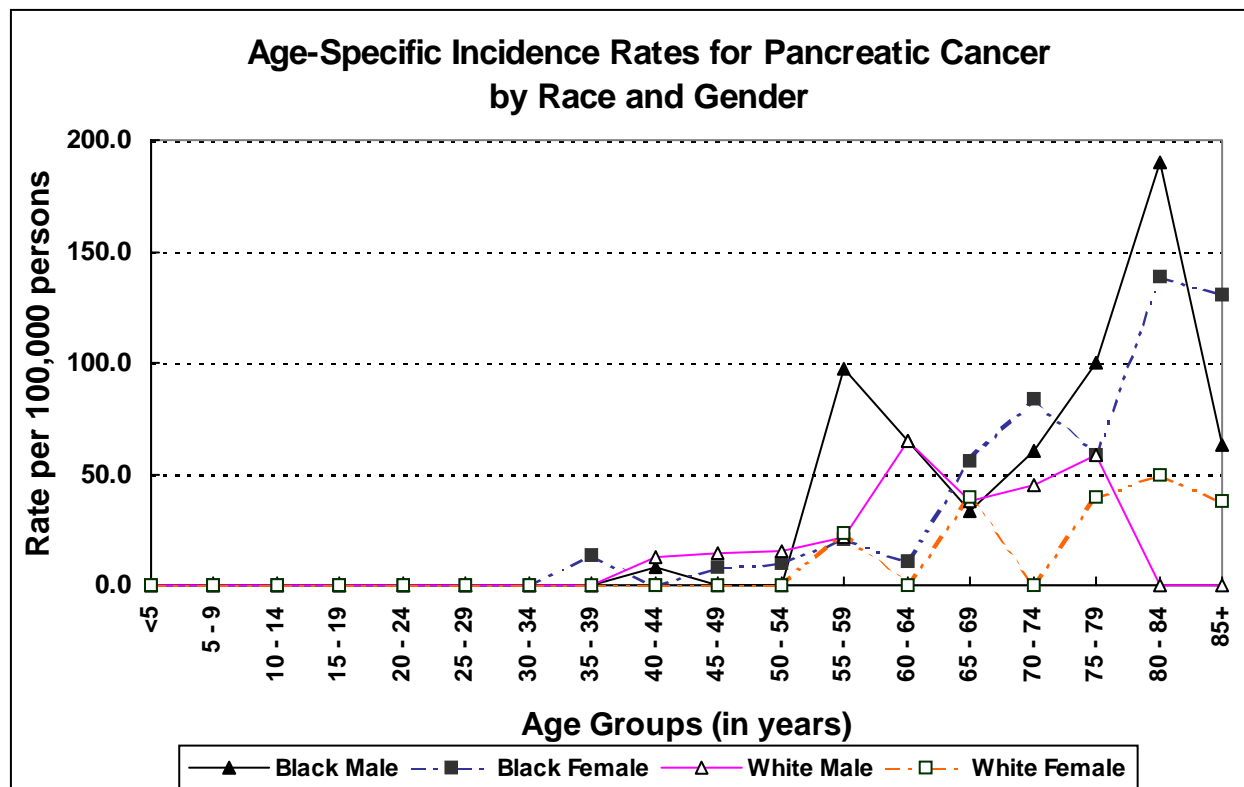
### General Risk Factors

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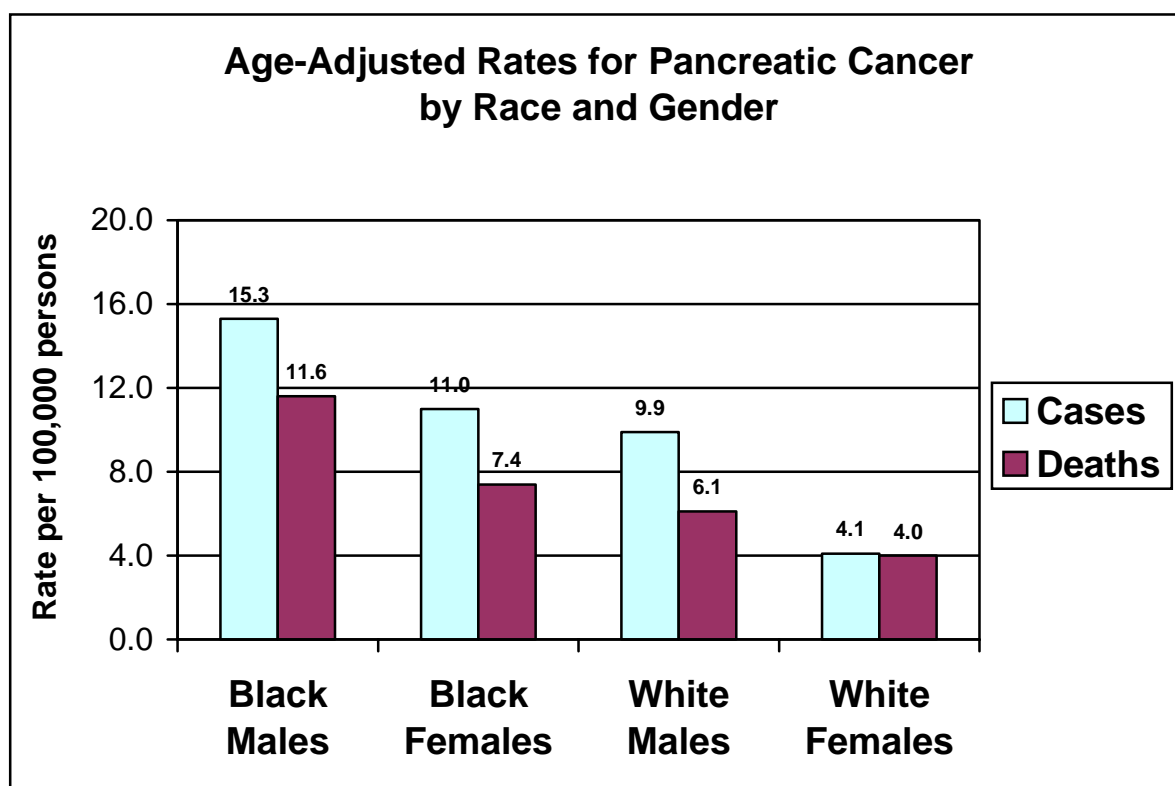
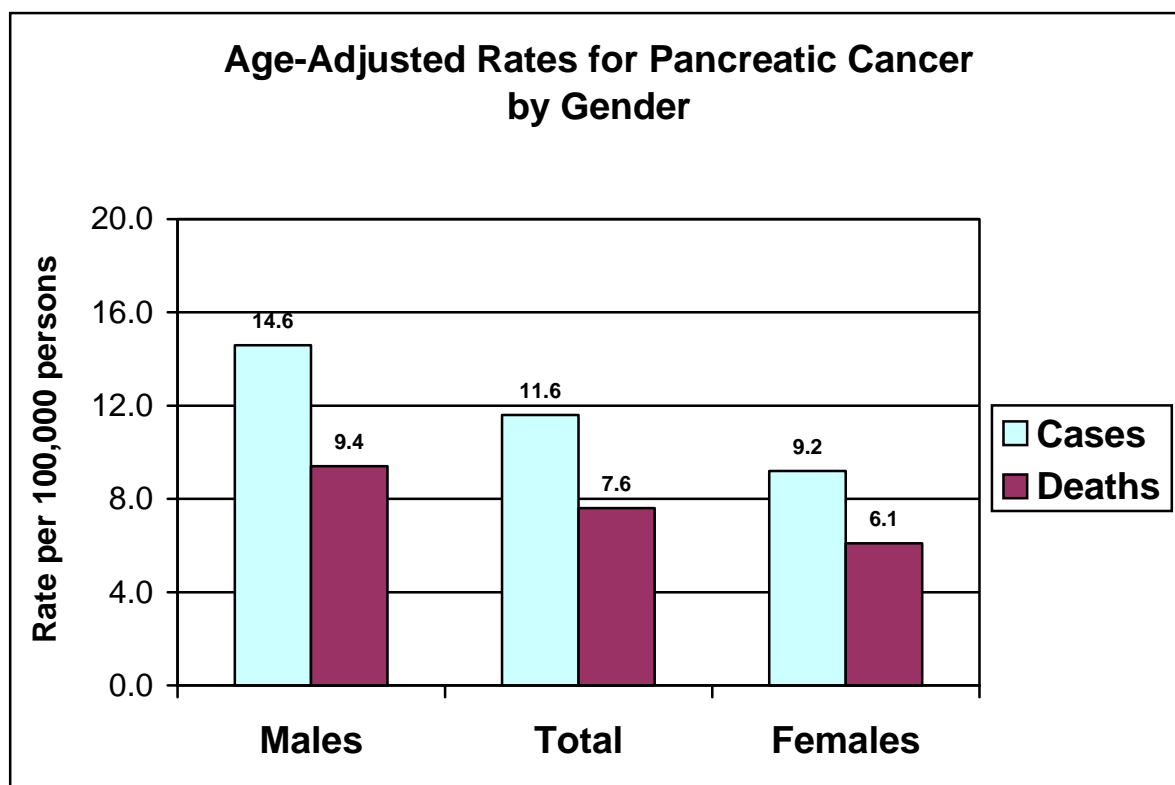
<b>Smoking</b>	This cancer is twice as common among smokers than non-smokers.
<b>Diet</b>	High dietary fat intake has been implicated as a potential risk factor.
<b>Occupation</b>	Higher risks are believed to occur in certain occupations, such as chemists, leather tanners, and auto workers, and those with exposure to petroleum products.
<b>Other</b>	Familial clustering has been observed in some studies. Pancreatic cancer usually progresses to an advanced stage before symptoms develop. It is rapidly fatal in a high percentage of cases.

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**Fig. 58: 1998 Age-Specific Incidence and Mortality Rates by Race and Gender - Pancreatic Cancer**



**Fig. 59: 1998 Age-Adjusted Incidence and Mortality Rates for Pancreatic Cancer by Race and Sex**

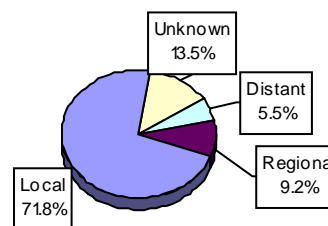


# Prostate

## Incidence and Mortality Summary

Age-adjusted incidence rate per 100,000	Male	Female	Total
DCCR	191.0	-	
SEER	142.0	-	
Total # of new cases	511	-	511
# of deaths	70	-	70
Incidence rate: 191.0 (95% confidence interval: 174.4 – 207.7)			
Incidence rates by wards: Mean: 190.9 Median: 176.4			
Range: 107.8 – 309.1 /100,000			

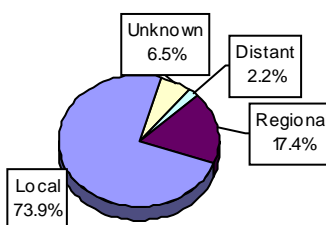
Stage at Diagnosis



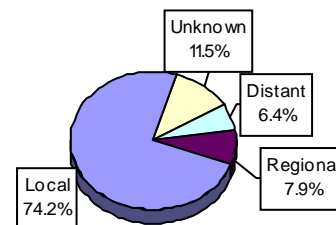
## Total Cases and Deaths by Ward

Ward	Cases	Deaths
Ward 1	38	7
Ward 2	58	10
Ward 3	49	7
Ward 4	105	19
Ward 5	95	8
Ward 6	59	8
Ward 7	66	8
Ward 8	38	3
Unknown	3	0

White



Black



## Description

<b>Incidence</b>	The incidence rate for prostate cancer in DC is 191/100,000, a rate 1.3 times the SEER rate and significantly different. The variation in rates by wards is 2.5-fold.
<b>Mortality</b>	The death rate for prostate cancer in DC is 24.4/100,000, a rate similar to that of the US.
<b>Age</b>	Prostate cancer cases first occur in the age group 40-44 years and the rates increase to ages 70-79 years.
<b>Race &amp; Gender</b>	<p>The risk of prostate cancer is twice as high in black men in DC than white men. The black/white ratio at young ages is about two-fold, but the ratio rises at older ages to a difference of three-fold. The excess risk in black men compared to white men in SEER is less than in DC. White males in DC have a rate that is significantly lower than SEER data. Black males in DC have an incidence rate very similar to that reported in SEER data. Thus the race specific rates are not higher in DC than in the US, so the high incidence in the city is due to the different racial distribution in the city compared to the US.</p> <p>The mortality rates in DC are significantly lower than those of males of either race in US data. The rate is especially low in black males. The difference in combined mortality rates compared to US are significantly low independent of the racial distribution in DC compared to US.</p>
<b>I/M ratio</b>	The incidence-mortality ratio in white males and black males in DC is 7.7. Those ratios for both races are higher than in US. The difference is due to lower mortality and not increased incidence as might occur with an increase in screening. These differences in results of mortality and incidence rates in DC compared to the US suggest the importance of examining race-specific rates.
<b>Trends</b>	DC rates of prostate cancer suggest both incidence and mortality rates are

declining in both white and black males. The SEER data indicate a significant decrease in incidence and mortality in recent years.

**Stage** Prostate cancer is usually detected at local and regional stages. In DC, the proportion of cases diagnosed in these stages is 81 percent, which is similar to reported stage in SEER data. Nine percent more cancers in white men are diagnosed at those stages than in black men.

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### General Risk Factors

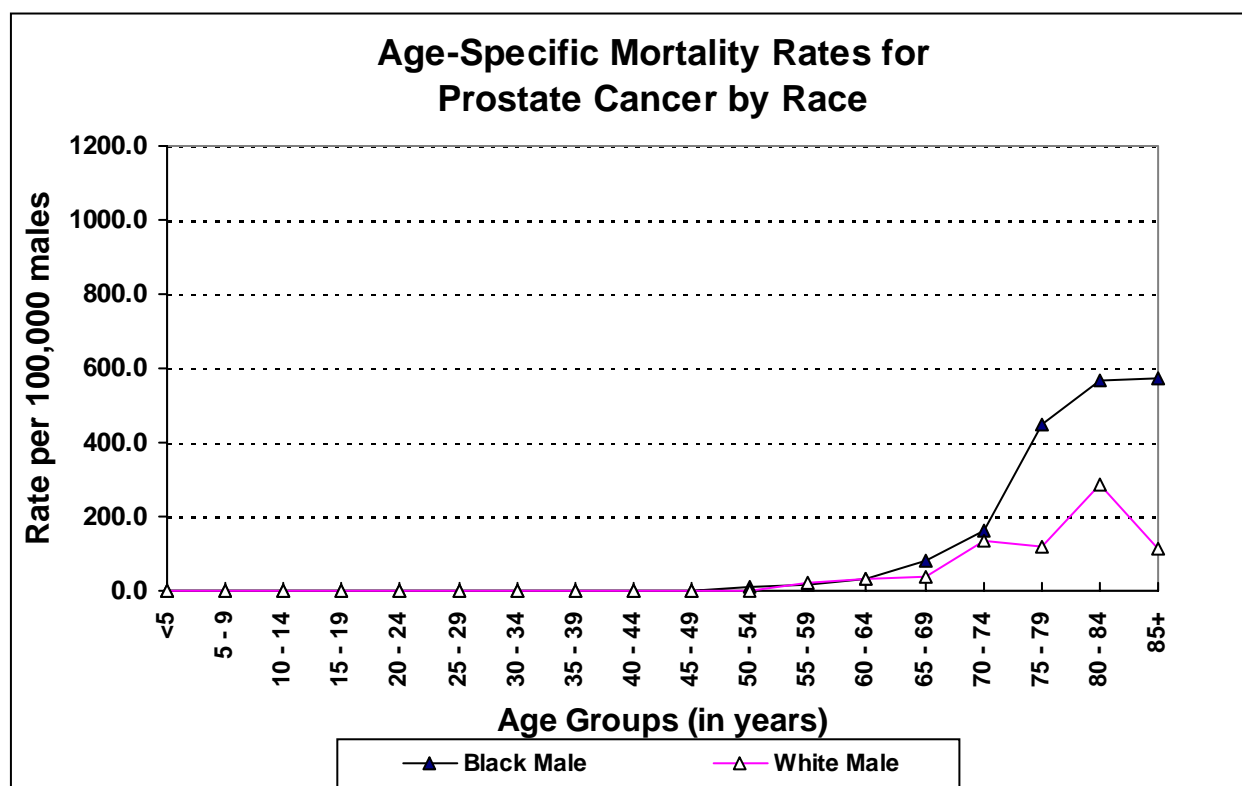
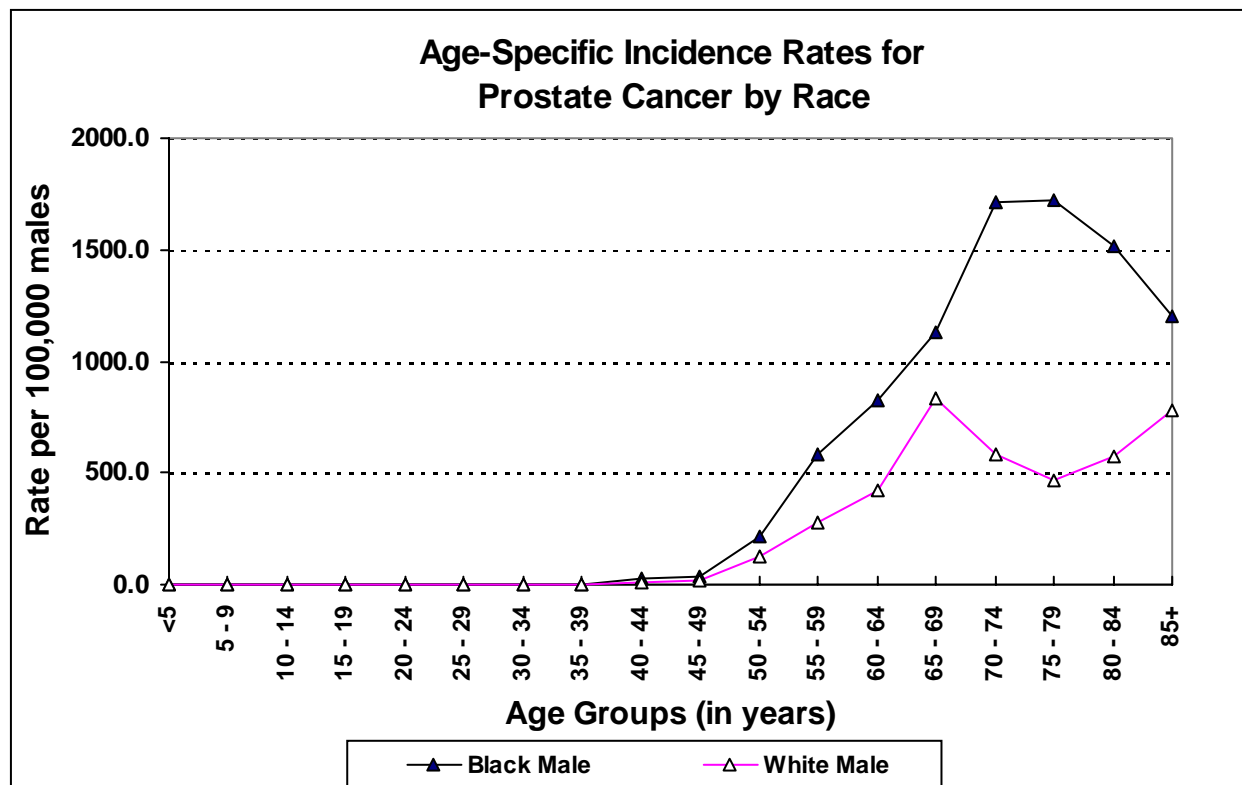
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**Diet** Dietary fat has been implicated in some studies.

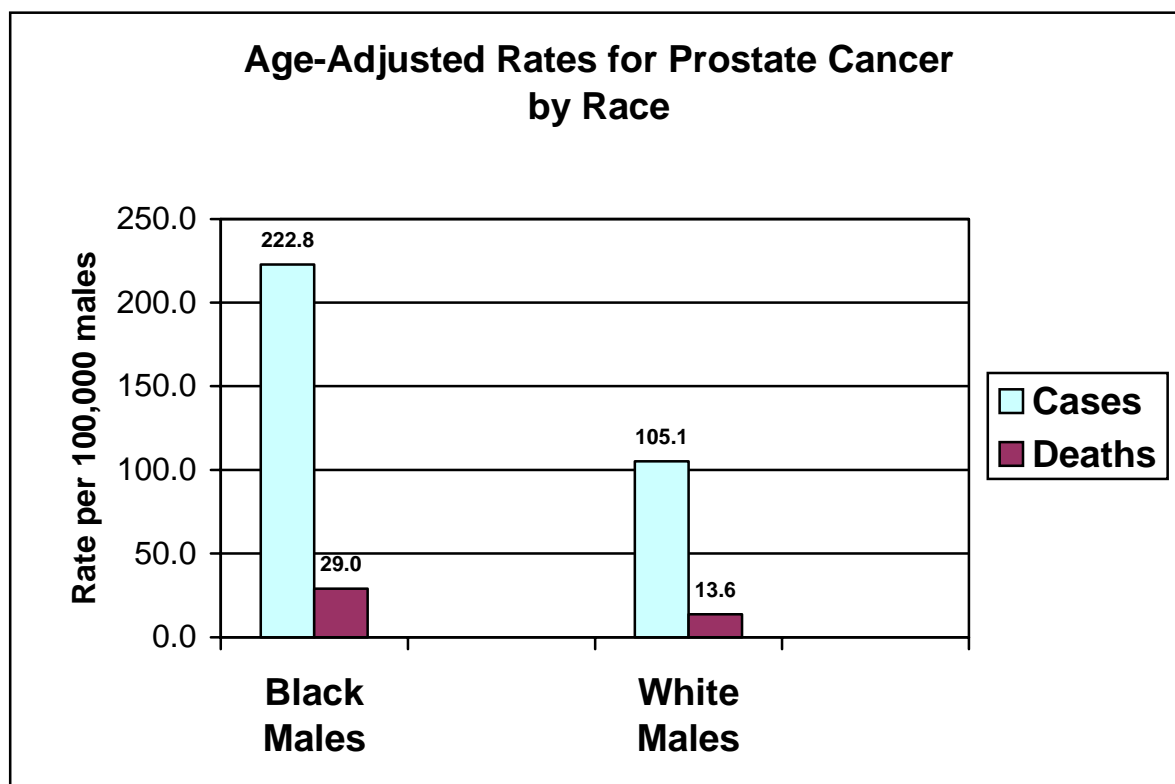
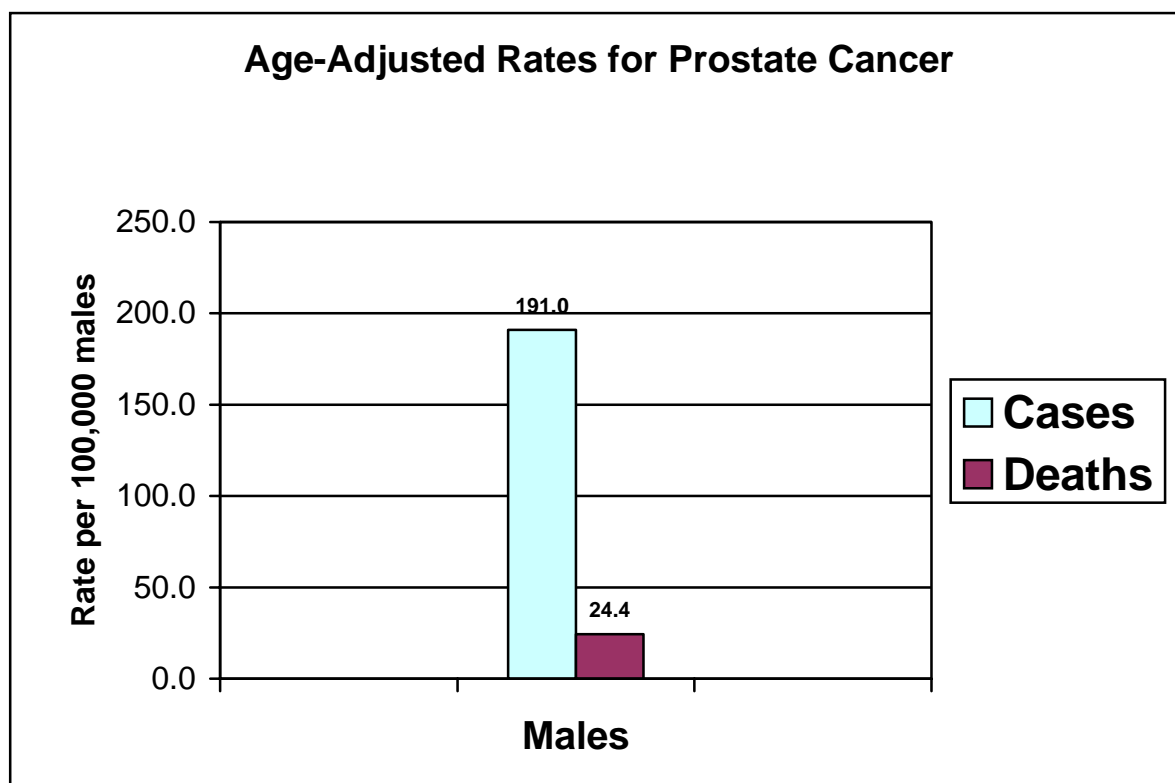
**Other** Environmental and familial factors may contribute to an increased incidence, but no specific factor in these two potential groups has been clearly defined.

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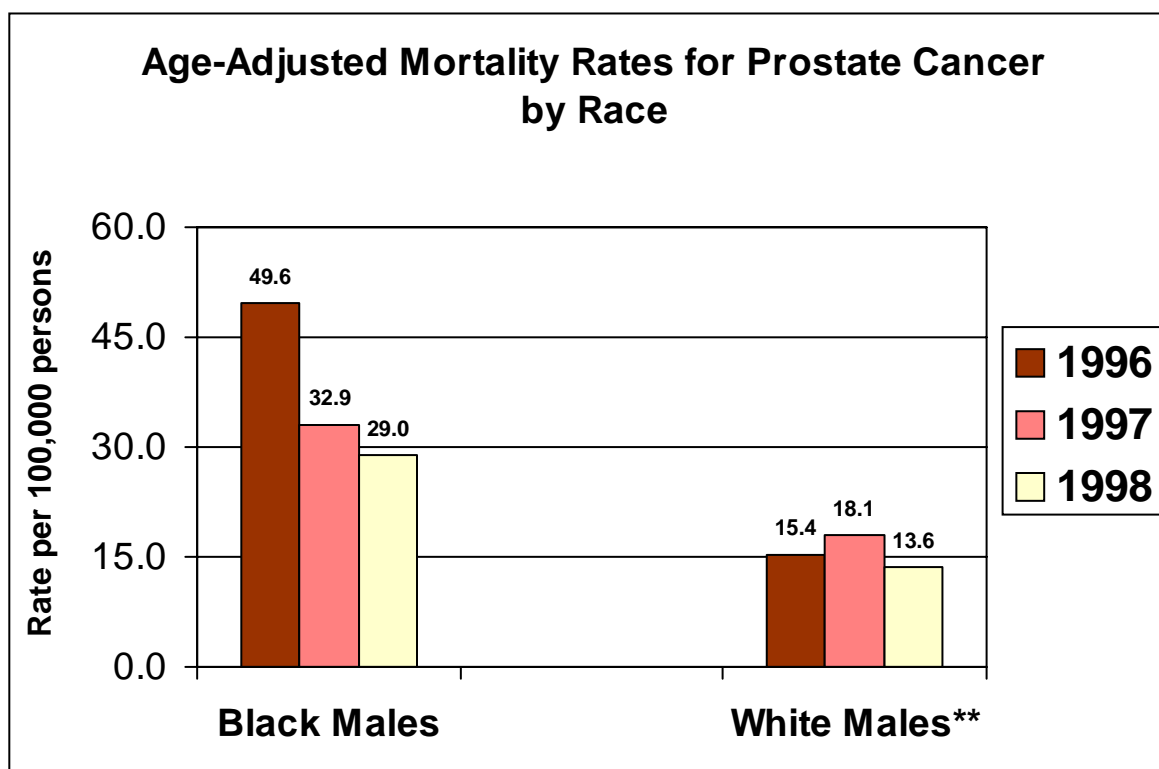
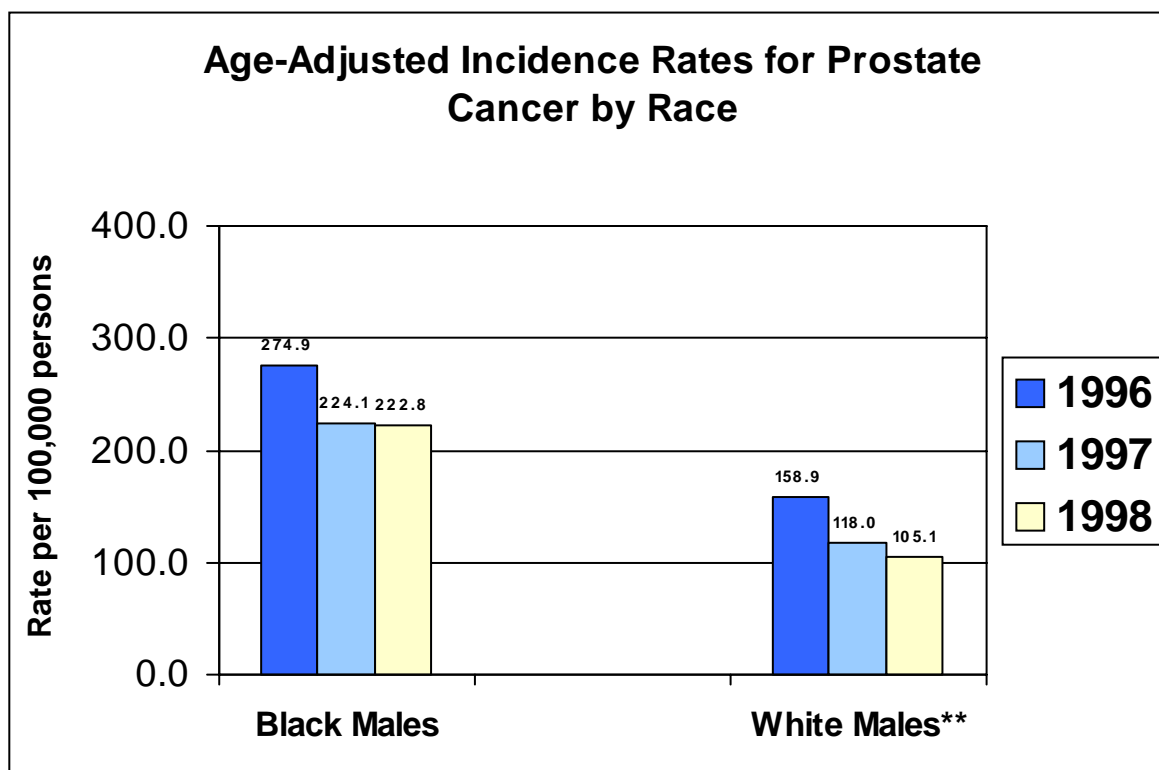
**Fig. 61: 1998 Age-Specific Incidence and Mortality Rates by Race – Prostate Cancer**



**Fig. 62: 1998 Age-Adjusted Incidence and Mortality Rates for Prostate Cancer by Race**



**Fig. 63: 1996 to 1998 Trends in Age-Adjusted Cancer Incidence and Mortality Rates by Race – Prostate Cancer**



\*\* Whites were grouped with American Indians, Asians and Pacific Islanders in 1996 only.

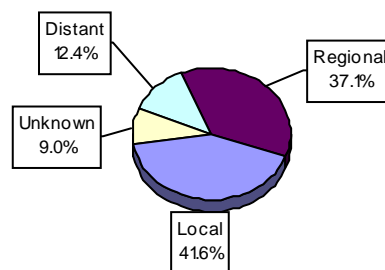


# Rectum, Anus & Anorectum

## Incidence and Mortality Summary

Age-adjusted incidence rate per 100,000	Male	Female	Total
DCCR	16.0	11.2	13.4
SEER	16.5	10.0	12.9
Total # of new cases	44	45	89
# of deaths	3	9	12
Incidence rate: 13.4 (95% confidence interval: 10.5 – 16.3)			
Incidence rates by wards: Mean: 13.2 Median: 13.8 Range: 4.8 – 21.1/100,000			

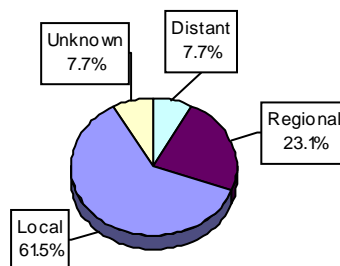
Stage at Diagnosis



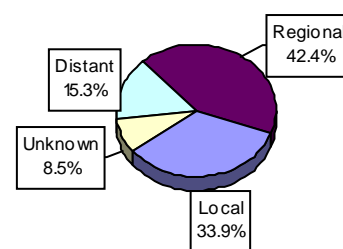
## Total Cases and Deaths by Ward

Ward	Cases	Deaths
Ward 1	11	1
Ward 2	12	2
Ward 3	13	1
Ward 4	9	1
Ward 5	18	2
Ward 6	10	1
Ward 7	12	3
Ward 8	3	1
Unknown	1	0

White



Black



## Description

<b>Incidence</b>	The incidence rate for rectal cancer in DC is 13.4/100,000 which is similar to the rate reported in SEER. The wards differ in rates by over 4-fold from lowest to higher rates.
<b>Mortality</b>	The mortality rate for rectal cancer is low 1.7/100,000. The number of deaths are few so comparisons of subgroups would be uncertain.
<b>Age</b>	Sporadic cases of rectal cancer are reported as early as age 20, but the increase in rates begins at ages 35-44 and continues into older ages.
<b>Race &amp; Gender</b>	Whereas colon cancer rates are almost equal in men and women, rectal cancer incidence in DC show a 1.4-fold excess risk in males compared to females similar to that reported in SEER. The black population has a slightly higher risk than the white population, primarily because of a difference in rates in males.
<b>I/M ratio</b>	The I/M ratio in DC for this cancer group is 7.9, suggesting a good survival for this cancer. There are no reported mortality rates for the US specific for rectal cancers.
<b>Trends</b>	The rectal cancer rates in DC as in the US data seem to be relatively stable.
<b>Stage</b>	<p>About 42 percent of rectal cancers in DC are diagnosed at local stages and 12 percent at distant stages, a distribution similar to that reported by SEER.</p> <p>The proportion of cancers in black populations diagnosed at local stages (34 percent) compared to white populations (62 percent) is low. More cancers are diagnosed with either regional or distant spread in the black populations. SEER reports very poor survival for this cancer if the case has distant spread with a five-year relative survival of only about 6 percent.</p>

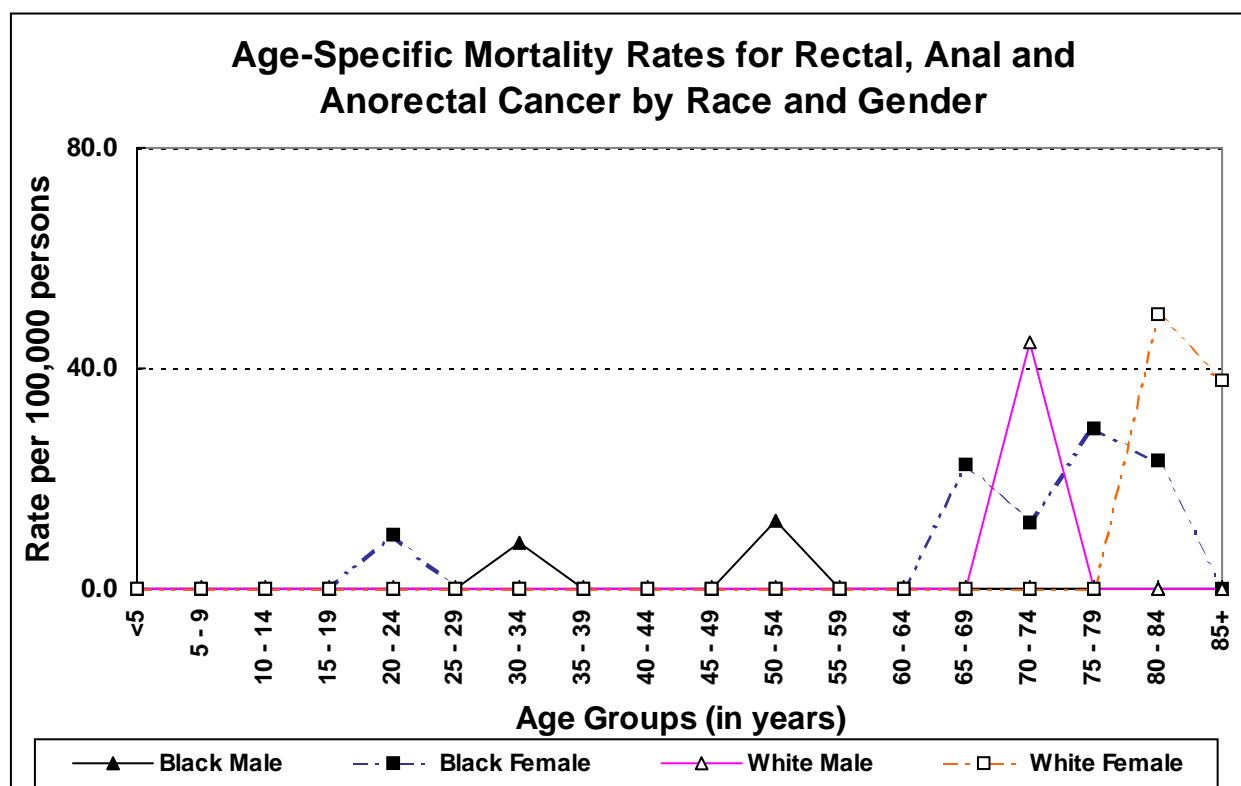
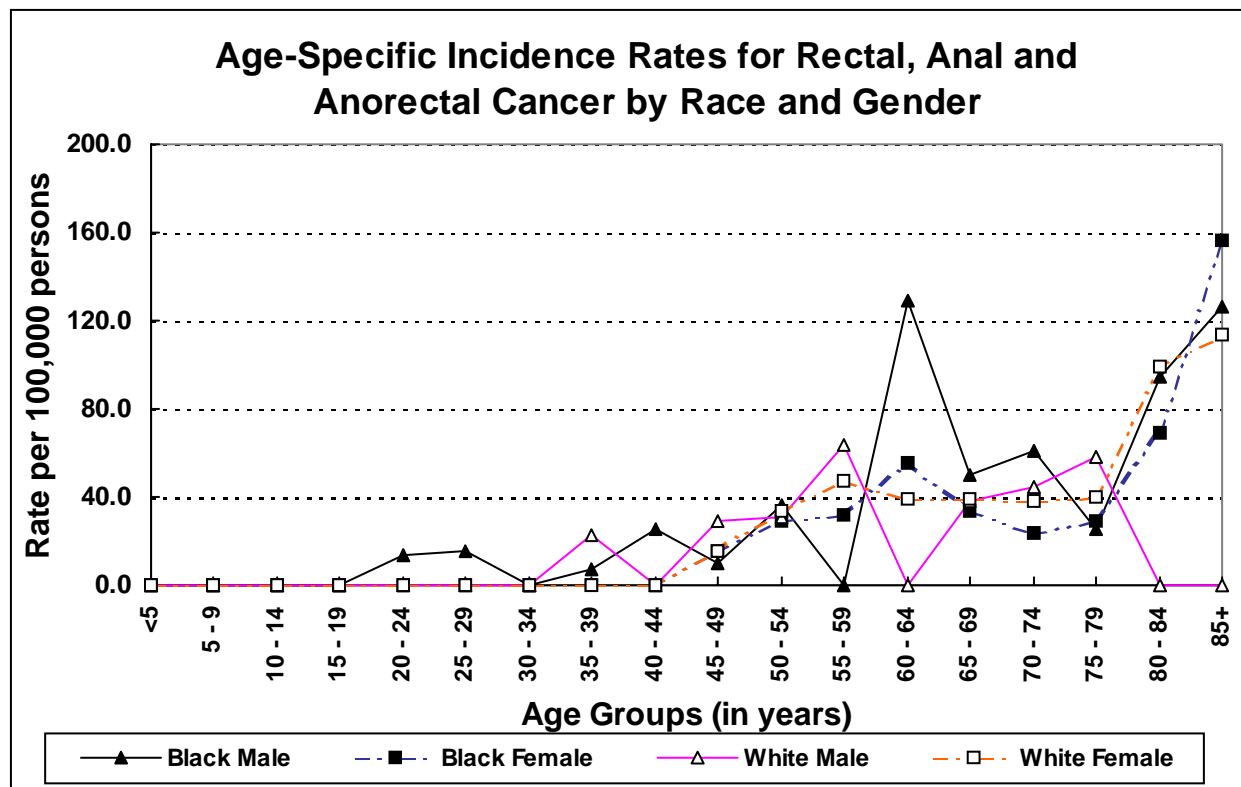
## General Risk Factors

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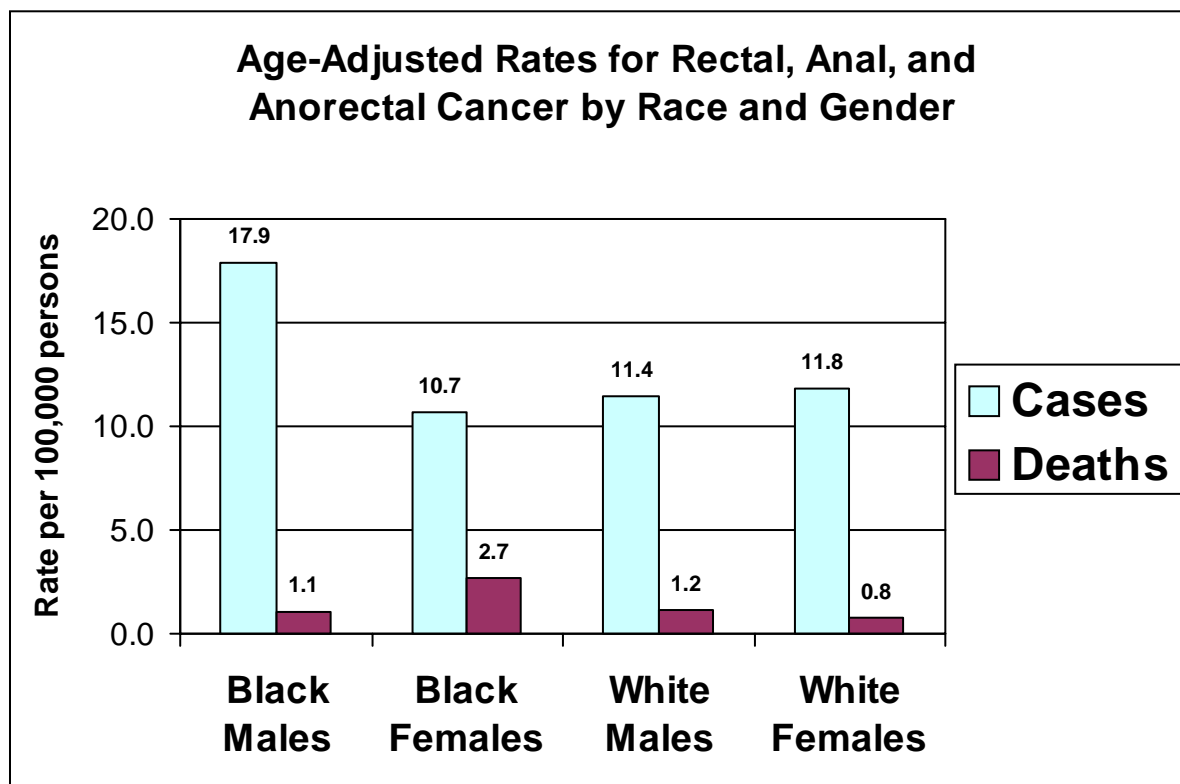
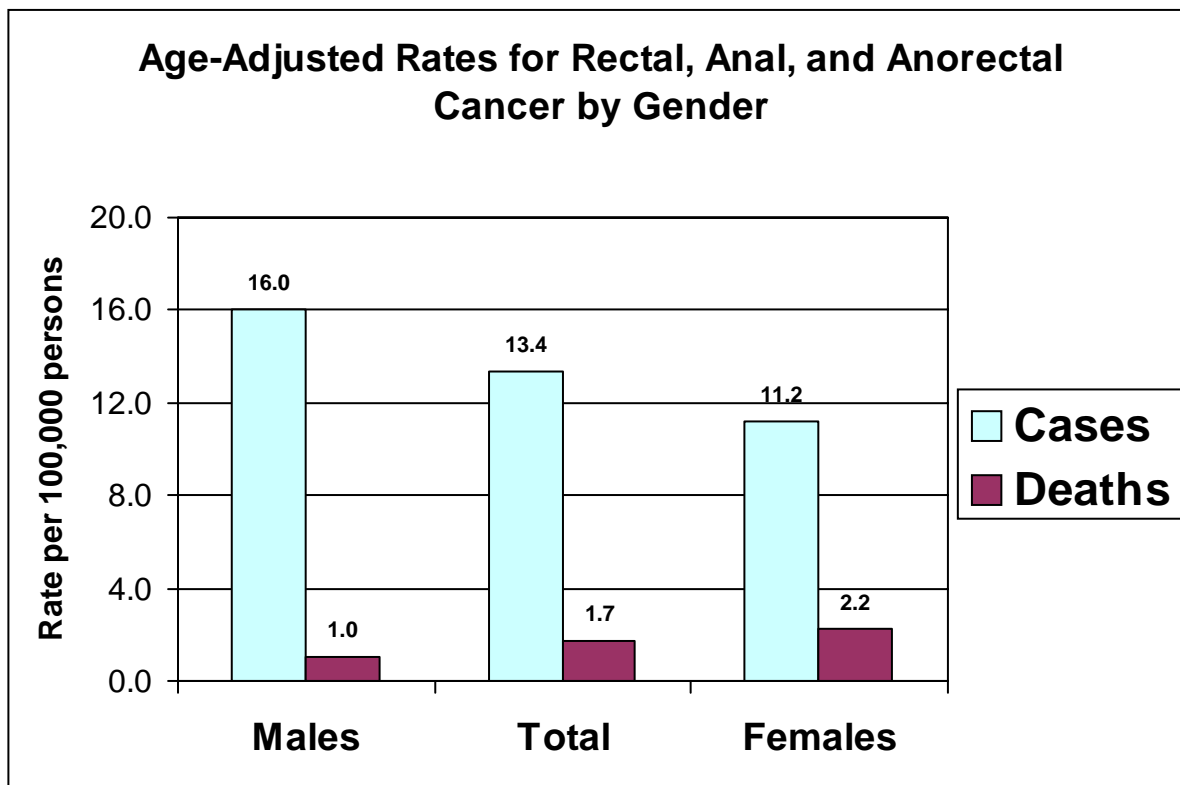
<b>Smoking</b>	Cigarette smoking is associated with increased risk.
<b>Diet</b>	Strong evidence exists that diets high in fat contribute to increased risk of rectal cancer. The lack of dietary fiber as a factor which increases risk has recently been questioned, but is still generally regarded as significant.
<b>Other</b>	<p>Adenomas are thought to be precursors to many cases of colorectal cancer. Individuals with a close family history of this cancer, inflammatory bowel disease (IBD) and those with a personal history of certain other cancers are at increased risk. Regular, moderate physical activity is associated with lower rates of this cancer. Anal warts caused by HPV (human papilloma virus) are associated with increased carcinoma of the anus. Many of the risk factors for rectal cancer are similar to those of colon cancer.</p> <p>Classification of the original site of the cancer is often difficult when the lesion occurs at the rectosigmoid junction.</p>

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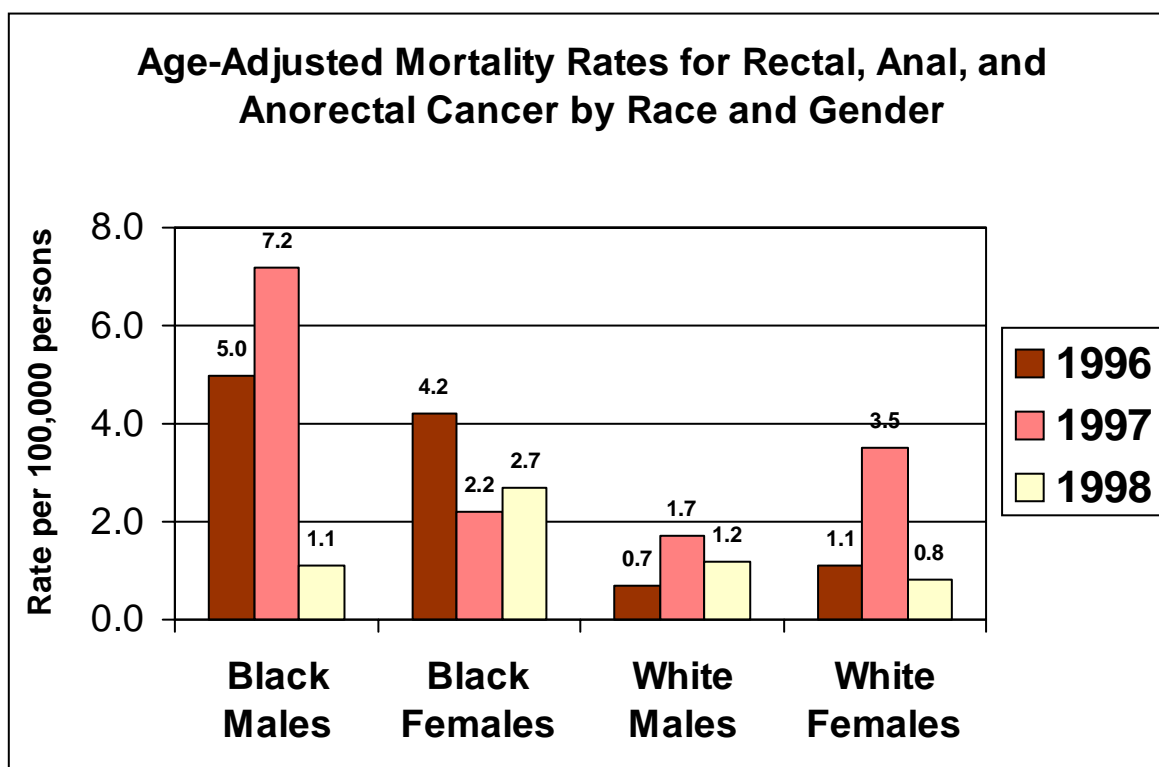
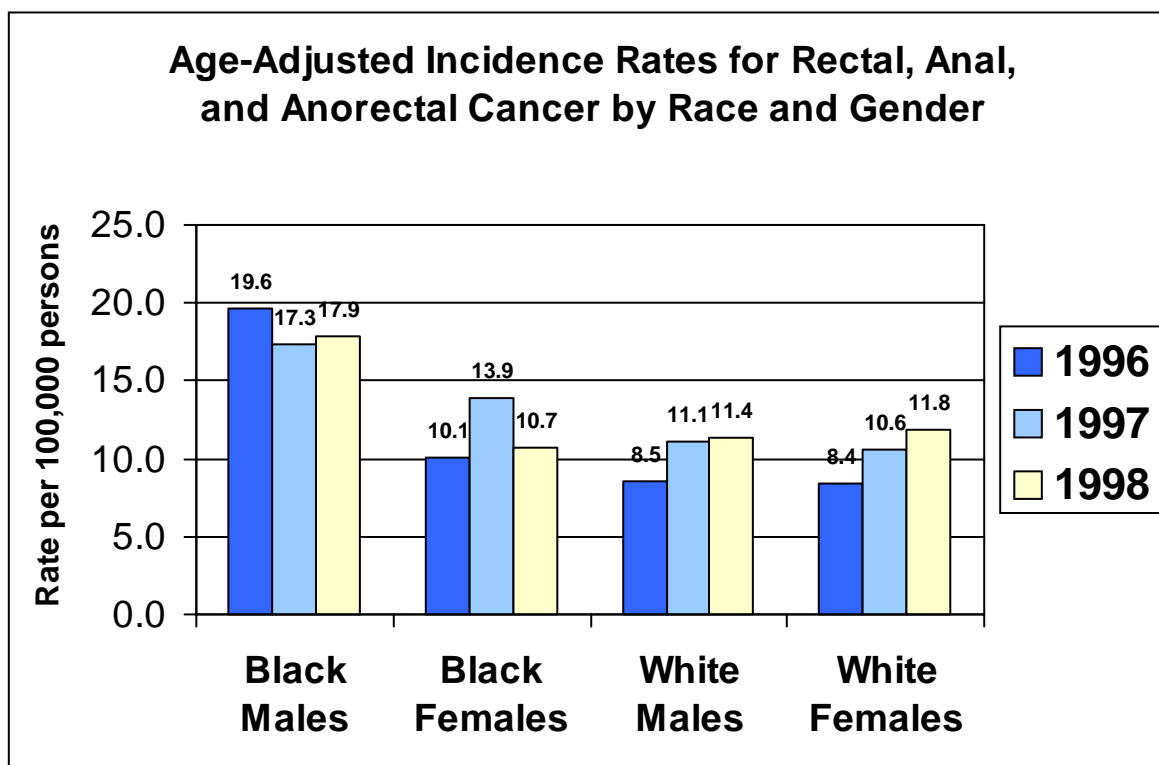
**Fig. 64: 1998 Age-Specific Incidence and Mortality Rates by Race and Gender - Rectal, Anal and Anorectal Cancer**



**Fig. 65: 1998 Age-adjusted Cancer Incidence and Mortality Rates for Rectal, Anal and Anorectal Cancer by Race and Sex**



**Fig. 66: 1996 to 1998 Trends in Age-Adjusted Cancer Incidence and Mortality Rates by Race and Sex – Rectal, Anal and Anorectal Cancer**

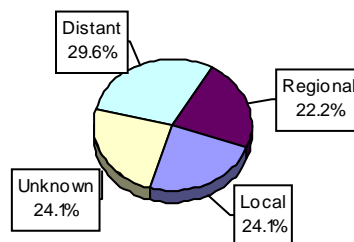


# Stomach

## Incidence and Mortality Summary

Age-adjusted incidence rate per 100,000	Male	Female	Total
DCCR	7.3	7.1	7.5
SEER	9.2	4.5	6.6
Total # of new cases	21	32	54
# of deaths	30	20	50
Incidence rate: 7.5 (95% confidence interval: 5.5 – 9.6)			
Incidence rates by wards: Mean: 7.5 Median: 7.7 Range: 0.9 – 11.5 /100,000			

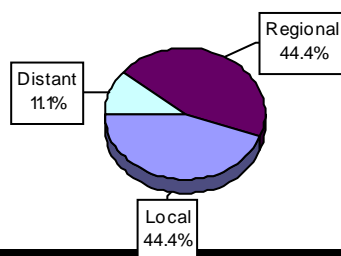
Stage at Diagnosis



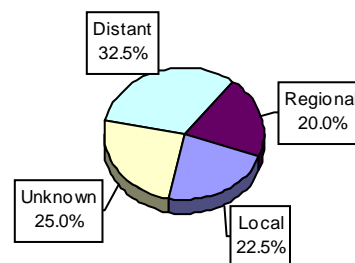
## Total Cases and Deaths by Ward

Ward	Cases	Deaths
Ward 1	5	5
Ward 2	5	5
Ward 3	1	1
Ward 4	11	9
Ward 5	10	10
Ward 6	7	7
Ward 7	6	7
Ward 8	8	5
Unknown	1	1

White



Black



## Description

- Incidence** The incidence rate for stomach cancer in DC is 7.5/100,000, a rate that is higher than SEER but not significantly higher. The variation in rates by ward are very wide (13-fold) but, if a possible outlier value is not considered, the variation is only two-fold.
- Mortality** The mortality for stomach cancer in DC is 7.2/100,000, a rate significantly higher than that reported for the US.
- Age** A few cases occur in ages between 25 and 49 years but the risk generally appears at age 50 and increases with each older age group thereafter in DC.
- Race & Gender** Men and women in DC have an almost equal rate of stomach cancer whereas the SEER rates demonstrate a clear two-fold predominance in risk for males. This discrepancy results from a significantly high risk in females and slightly lower rate in males.
- Blacks have a two-fold higher risk of this cancer compared to whites. However, neither rate is higher than that reported by SEER. Therefore the high stomach cancer incidence rate in DC compared to the US is related to the differences in racial distribution in the two populations.
- The white male incidence rate is much lower than the US but based on very small numbers. The rate in black males is significantly lower than that reported by SEER. The female rates in DC are the same as SEER in black females and higher in white females.

**I/M ratio** The incidence rates in 1998 for males is below the mortality rate for that year.

There is no apparent explanation for this sudden drop in the incidence in males only. Because of this, three-year average incidence and mortality rates have been used to compare to US. The SEER data suggest that ratios for all race gender categories are about 1.4 to 1.6 with the higher ratios in males. The ratios in the white population are similar in DC, but the black men and women in DC have a lower ratio due to similar or even higher mortality and a lower incidence compared to the US.

- Trends** The unusual characteristics of the DC trends has been the rapid drop in incidence, which, in 1998, is less than half of rates in the previous years for males only.
- Stage** The overall distribution of stages for DC cases does not differ from SEER stages at diagnosis. Comparisons by race are inappropriate because of the small number of cases in the white population.

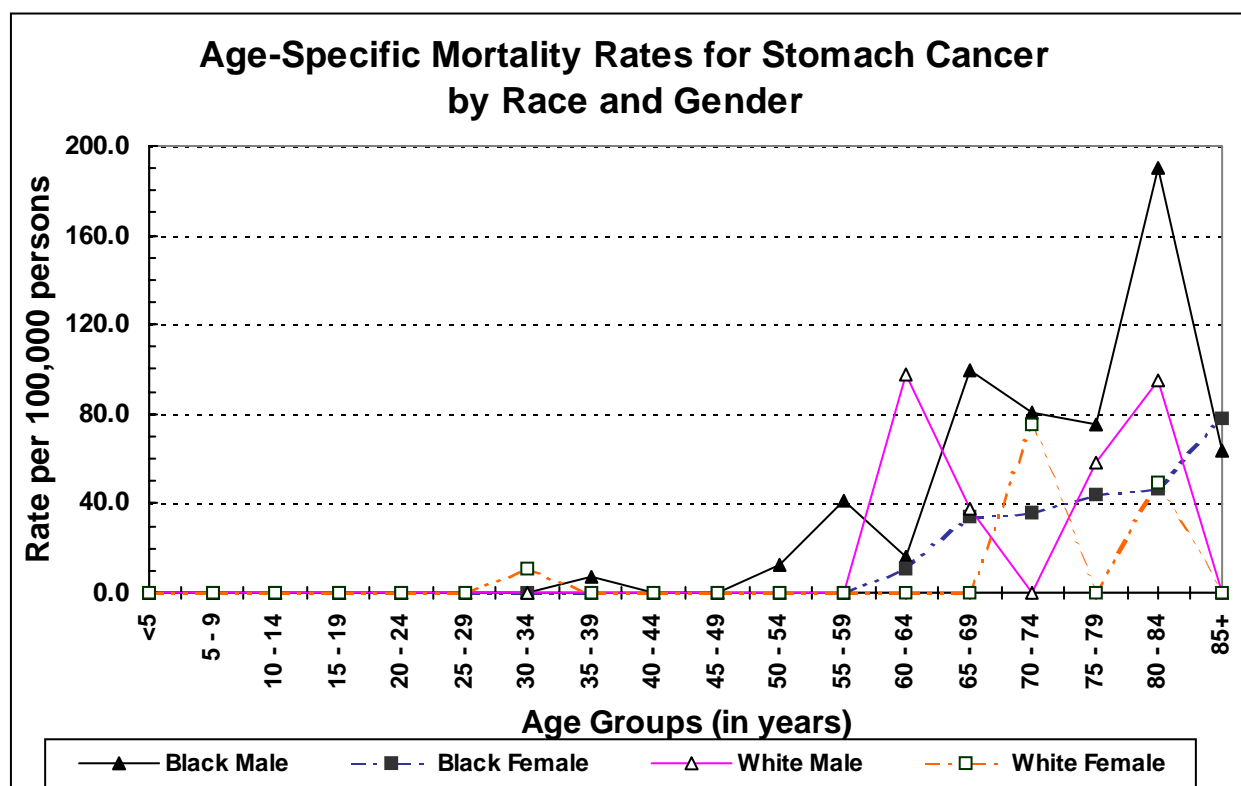
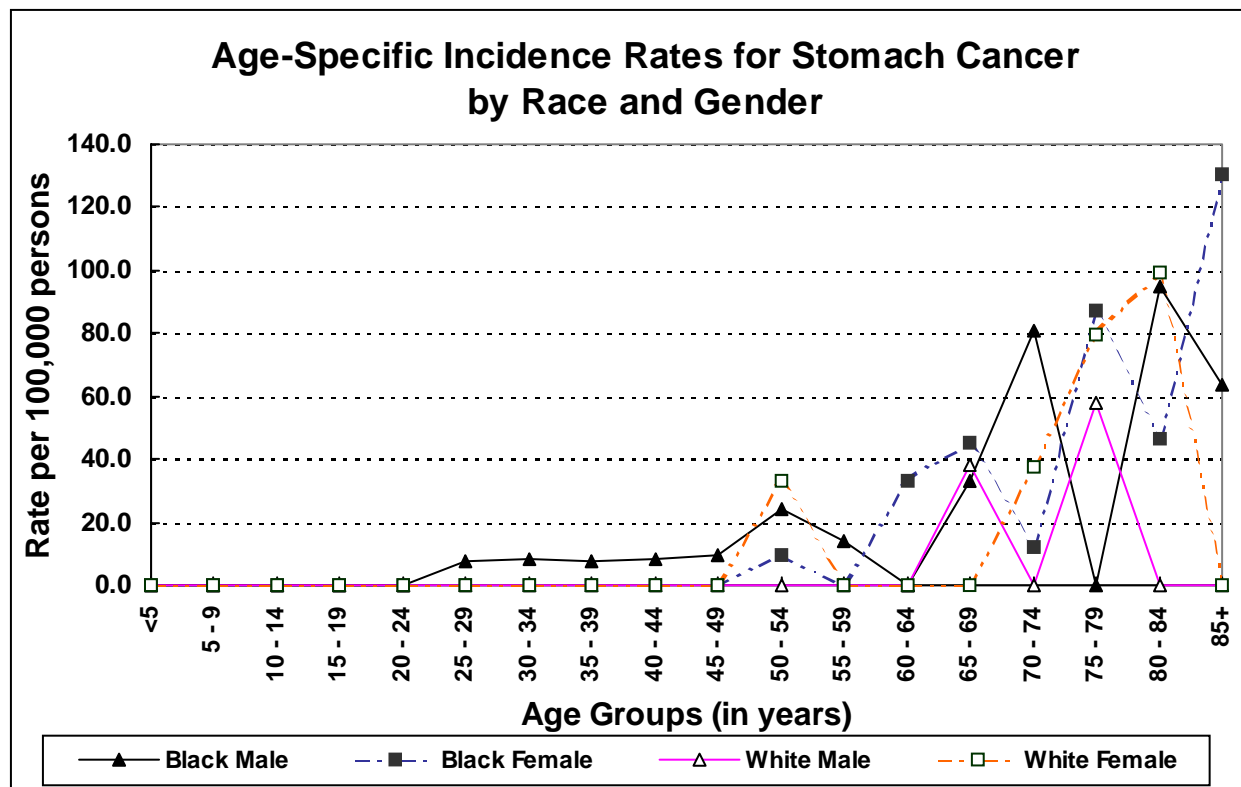
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### General Risk Factors

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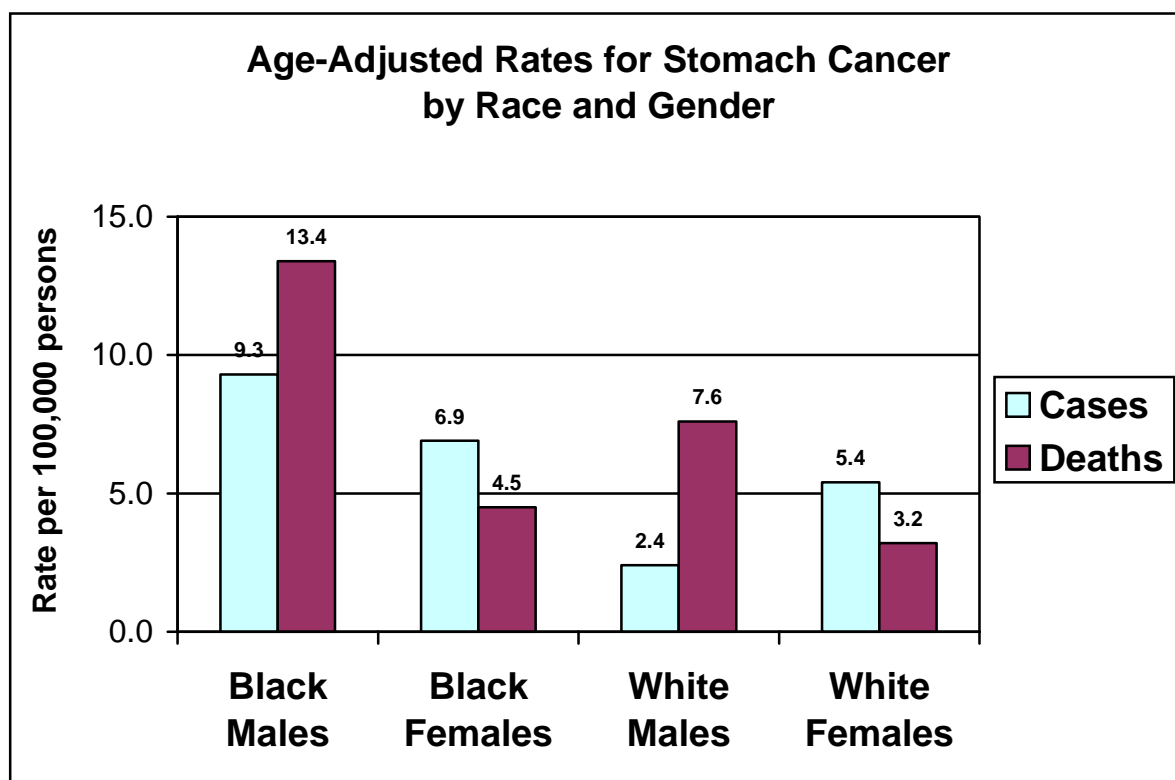
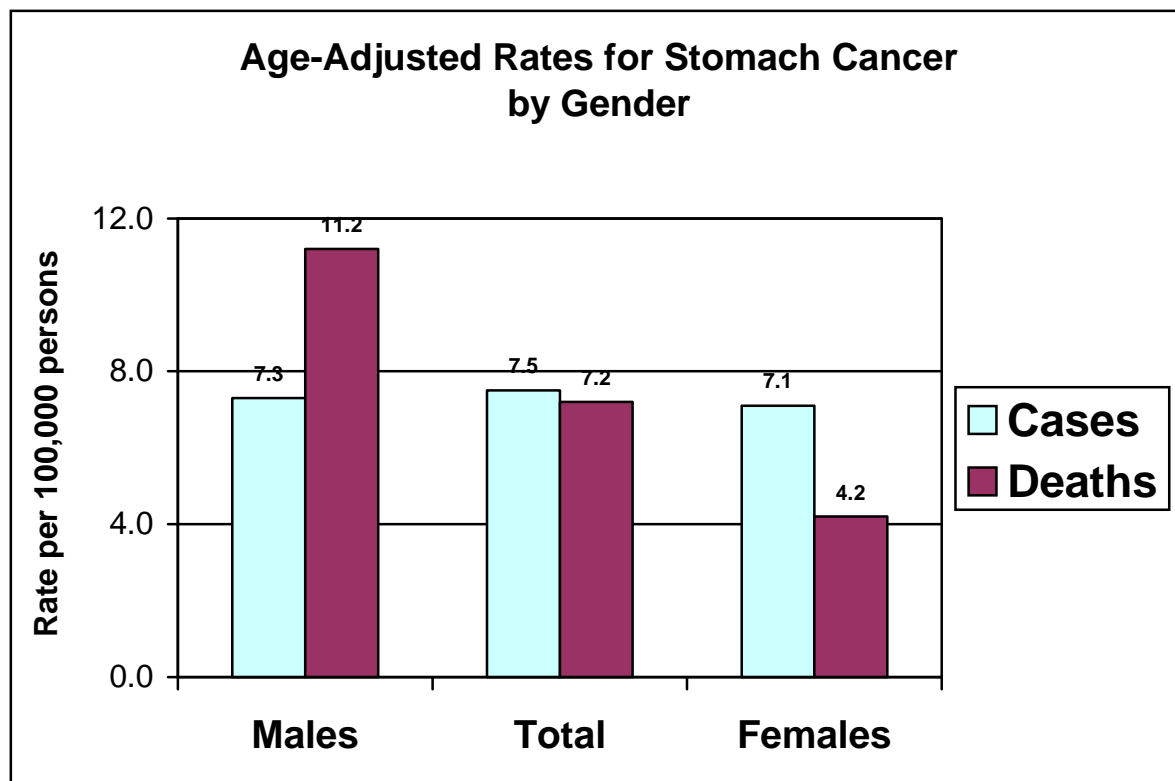
- Diet** Increased risk has been attributed to diets high in salt, nitrates, nitrites, and smoked foods. Diets high in fresh fruits and vegetables seem to be protective.
- Other** Increased risk for stomach cancer has been suggested with long term infection with certain bacteria, *Helicobacter pylori*, although many who are infected never develop the disease.
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**Fig. 67: 1998 Age-Specific Incidence and Mortality Rates by Race and Gender - Stomach Cancer**

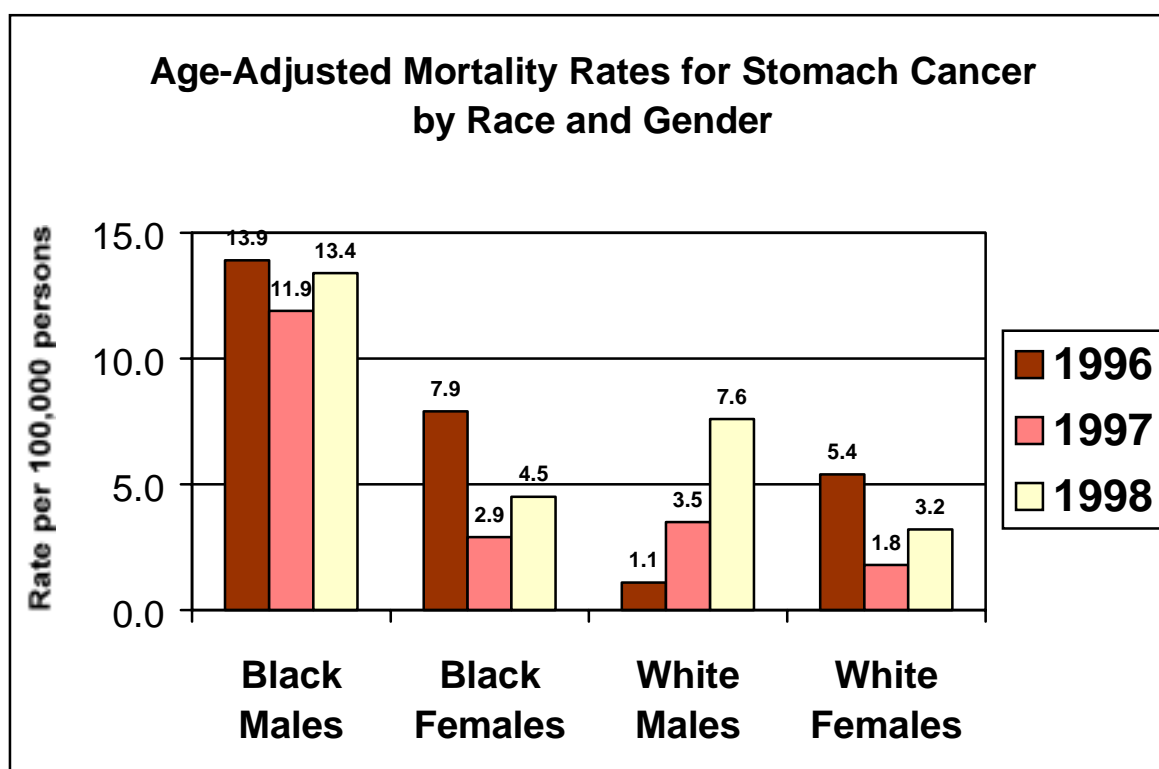
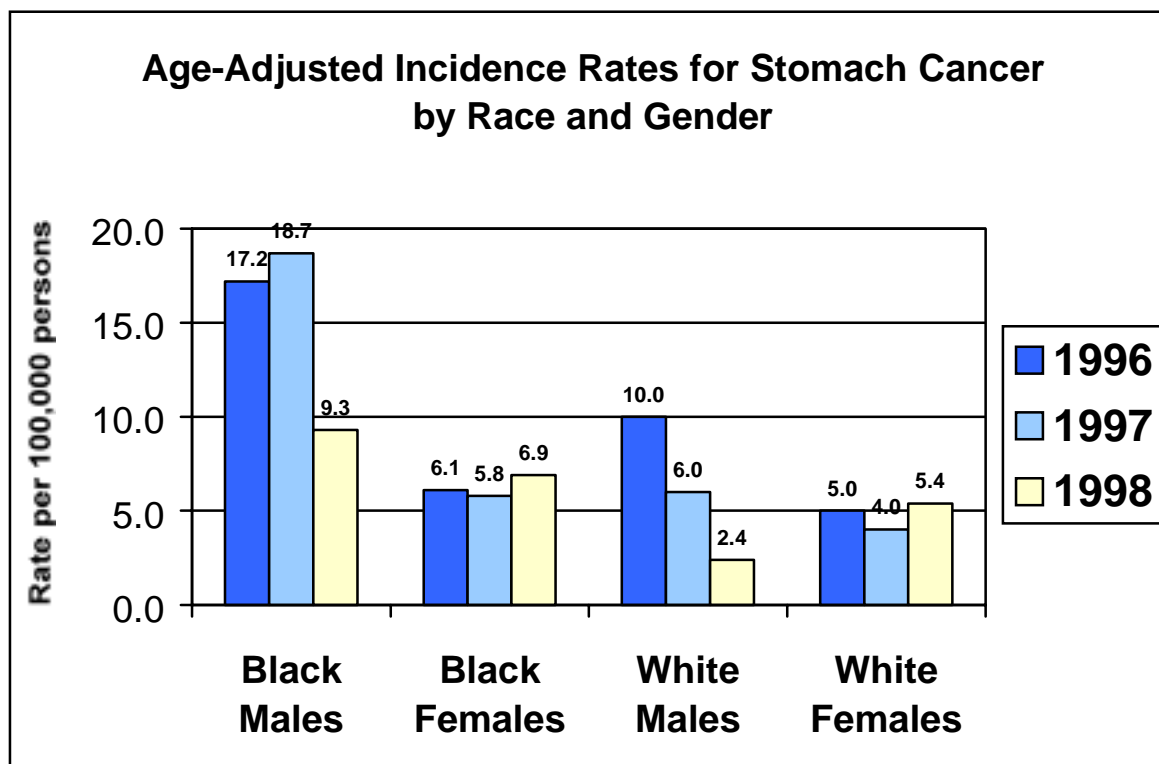




**Fig. 68: 1998 Age-Adjusted Incidence and Mortality Rates for the Stomach Cancer by Race and Sex**



**Fig. 69: 1996 to 1998 Trends in Age-Adjusted Cancer Incidence and Mortality Rates by Race and Sex – Stomach Cancer**

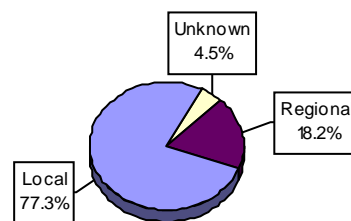


# Thyroid

## Incidence and Mortality Summary

Age-adjusted incidence rate per 100,000	Male	Female	Total
DCCR	5.9	7.1	6.5
SEER	3.2	8.6	6.0
Total # of new cases	17	27	44
# of deaths	2	1	3
Incidence rate: 6.5 (95% confidence interval: 4.5 – 8.4)			
Incidence rates by wards: Mean: 6.2 Median: 5.4 Range: 2.5 – 13.1 /100,000			

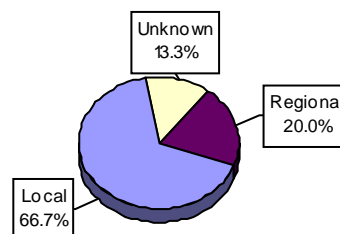
Stage at Diagnosis



## Total Cases and Deaths by Ward

Ward	Total Cases	Deaths
Ward 1	12	1
Ward 2	4	0
Ward 3	3	0
Ward 4	6	1
Ward 5	5	1
Ward 6	6	0
Ward 7	3	0
Ward 8	3	0
Unknown	2	0

White



Black



## Description

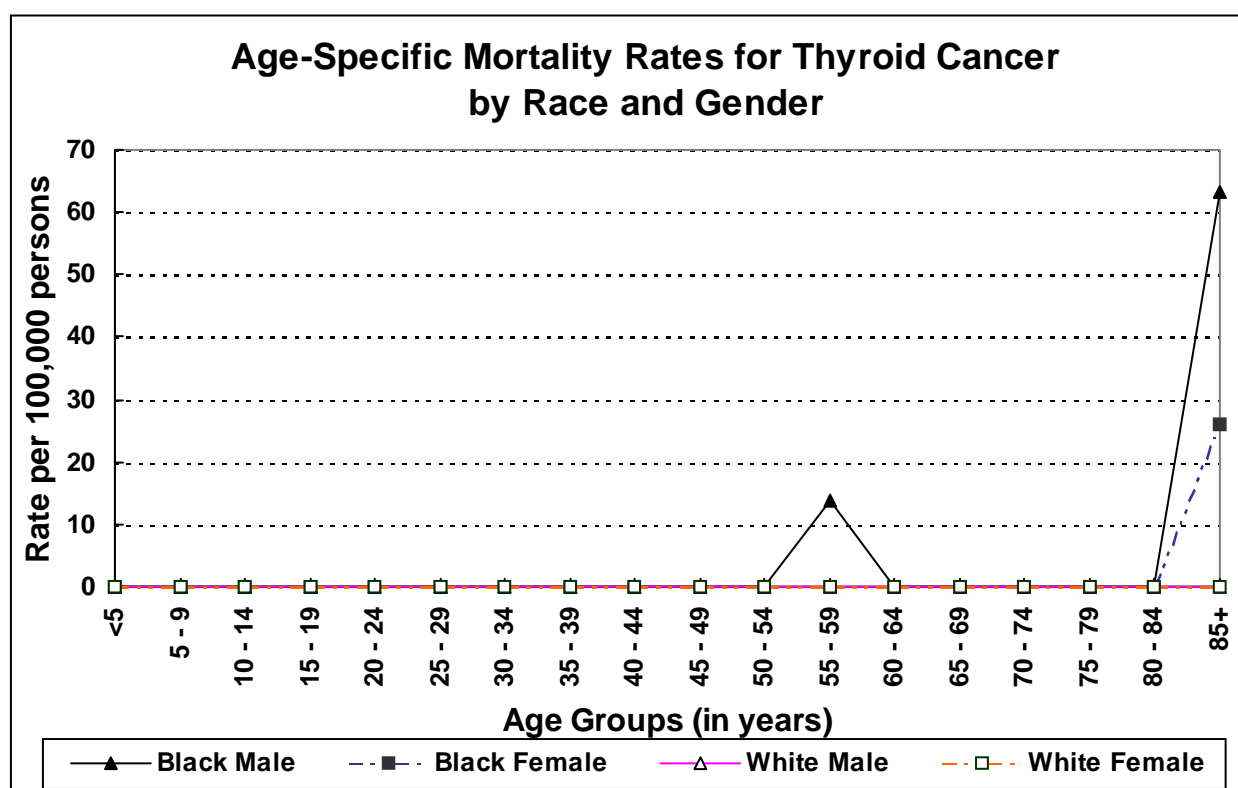
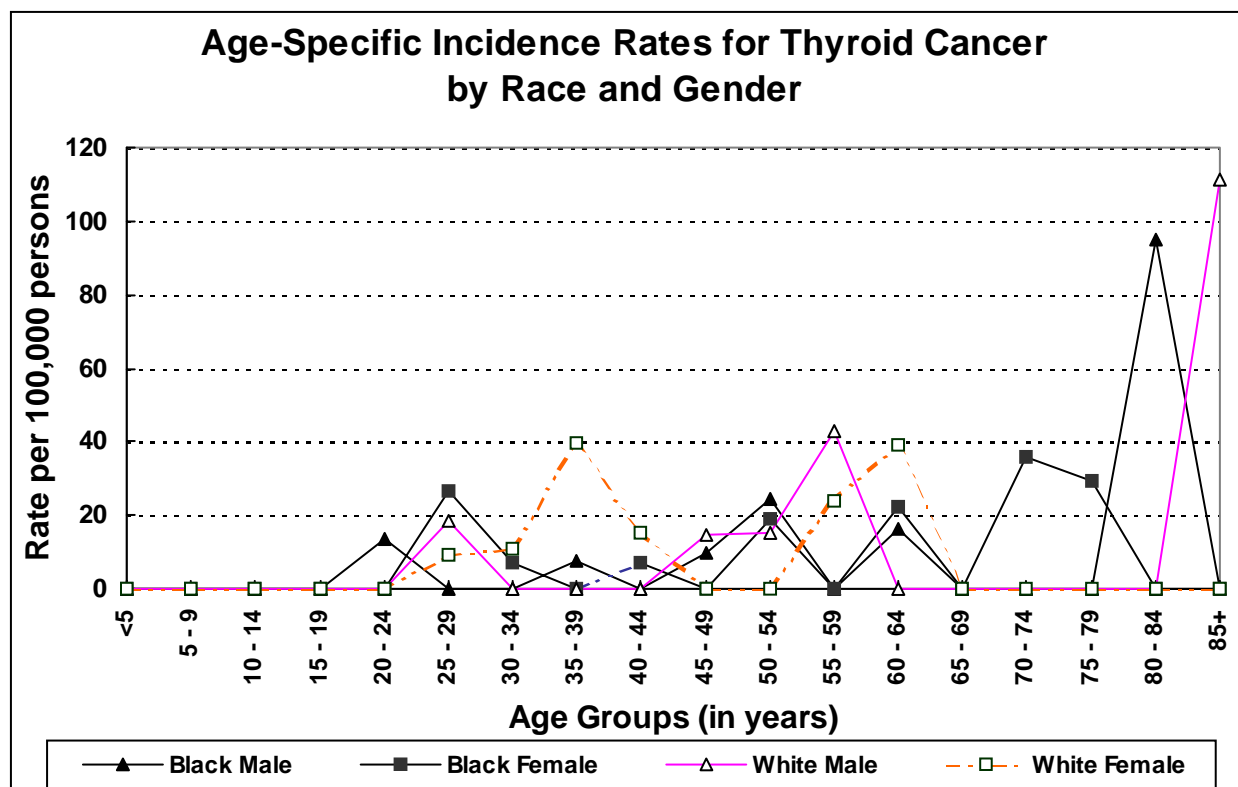
<b>Incidence</b>	The incidence rate for thyroid cancer in DC is 6.5/100,000, a rate which is only slightly higher than SEER rates. The rate in the highest compared to the lowest ward demonstrates a 3.7-fold difference but numbers for individual wards are small.
<b>Mortality</b>	Deaths from this cancer are very infrequent and so mortality comparisons are not appropriate.
<b>Age</b>	No cases occur in childhood (although this cancer can occur in children) but rates begin at age 20 and remain relatively constant throughout all age groups.
<b>Race &amp; Gender</b>	Females have 1.2 times higher rate than males, a ratio that is much lower than that reported in SEER. This is due to both slightly lower rates in females and higher rates in males in DC compared to the rates in SEER. None of these differences are significant. A comparison of incidence rates for white and black populations in DC indicate very little difference in rates compared to the 1.8-fold higher rate for white than black populations as reported in SEER. The reason for both female to male ratio and white to black ratio discrepancies between DC and SEER are primarily the high incidence rates in black men in DC.
<b>I/M ratio</b>	Mortality rates are too low for appropriate comparisons.
<b>Trends</b>	SEER data indicate an increasing risk of this cancer over time, although the changes are not significant. It is difficult to determine a trend from the DC data.
<b>Stage</b>	The SEER data indicate that about 62 percent of cancers are detected at a local stage. The DC cancers have a higher percentage of cases, 77 percent, diagnosed while still in a local stage. Although numbers are small, men and the black population appear to have detection at earlier stages than women or the white population respectively.

## General Risk Factors

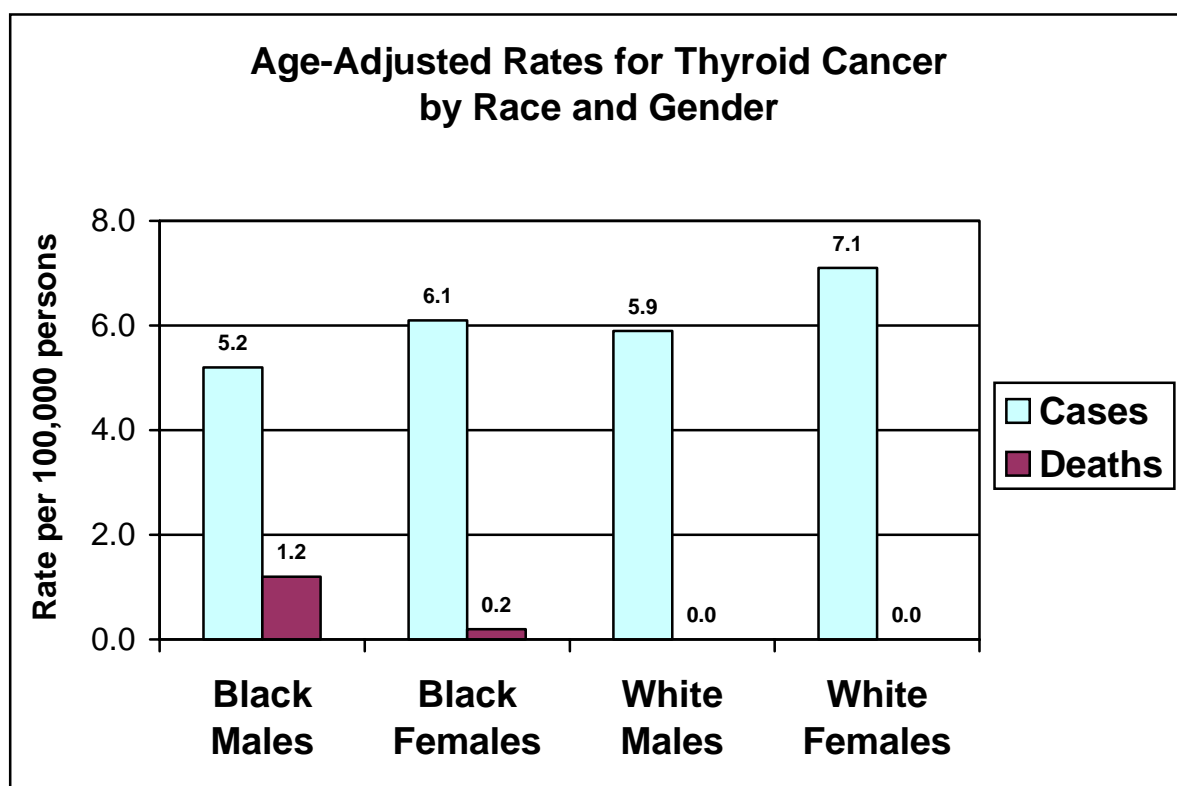
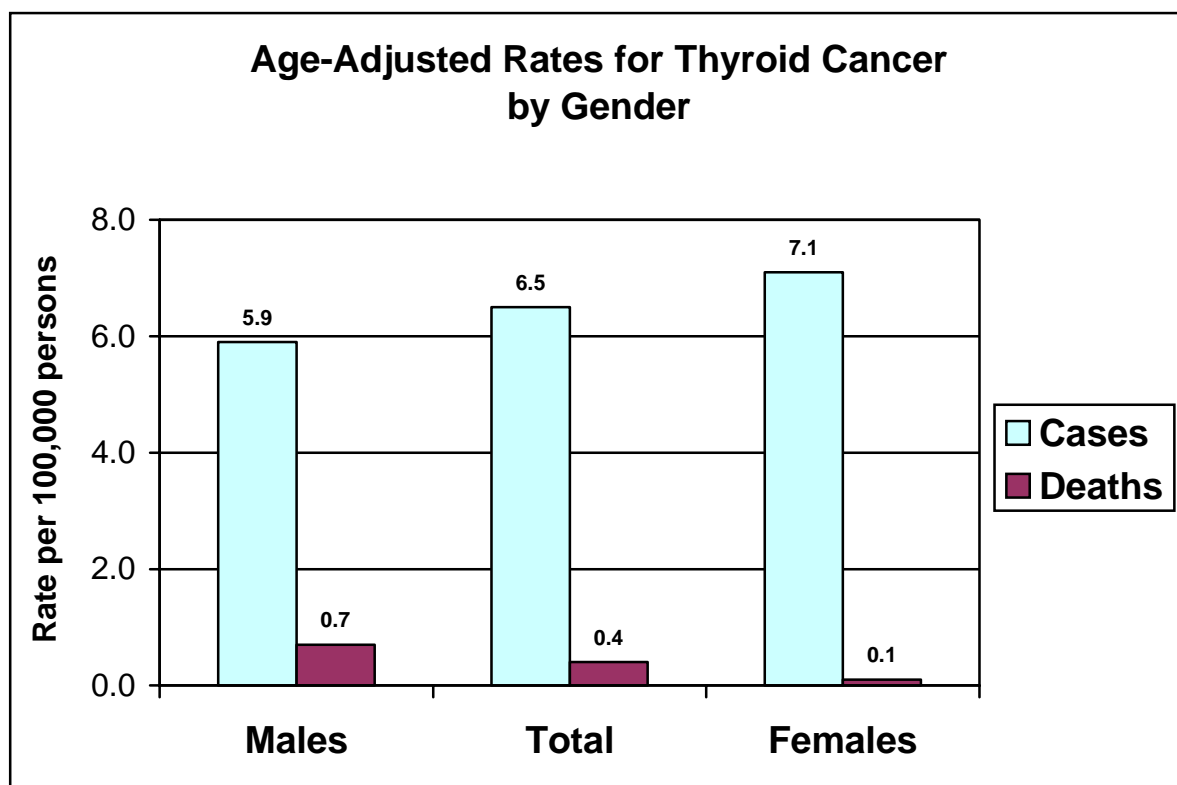
**Other** Occupational and environmental exposures to ionizing radiation have been associated with higher rates of thyroid cancer. Radiation exposure to the head and neck in childhood is a well known risk factor. Family history of thyroid cancer substantially increases the risk. Death due to thyroid cancer under age 40 is rare. Prognosis worsens with each decade of age over 50.

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**Fig. 70: 1998 Age-Specific Incidence and Mortality Rates by Race and Gender - Thyroid Cancer**



**Fig. 71: 1998 Age-Adjusted Incidence and Mortality Rates for Thyroid Cancer by Race and Sex**



**Fig. 72: 1996 to 1998 Trends in Age-Adjusted Cancer Incidence and Mortality Rates by Race and Sex – Thyroid Cancer**

